ASBPE Magazine of the Year 2006

FIORINA BAD, HURD GOOD, HP BETTER
Steve Duplessie sees the boardroom scandal as the single blemish on HP's stellar performance. **PAGE 25**

LACKING CONTROLS
IBM midrange users may be leaving the doors to their systems open. **PAGE 10**

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NOVEMBER 6, 2006 ▪ VOL. 40 ▪ NO. 45 ▪ $5/COPY

IT Efforts to Help Determine Election Successes, Failures

Dems deploy data tools; GOP expands microtargeting use

BY HEATHER HAVENSTEIN

Perhaps the only issue that sparring Democrats and Republicans can agree on prior to tomorrow's midterm elections is the increasing importance of using technology to better target specific voters.

The Democratic National Committee has spent $8 million since the 2004 presidential election to overhaul its core voter database as part of an effort to eradicate major data quality problems.

Also over the past two years, the Republican National Committee, acknowledged by both parties to have better exploited IT in recent elections, has expanded its use of a data mining and modeling technique called microtargeting, which adds consumer data to voter files to better identify potential voters.

Ben Self, the DNC's director

Microtargeting, page 16

> **Now, we literally target household by household. Michigan is a swing state, and [we] cannot afford not to talk to every single potential voter in the state.**
>
> SAUL ANUZIS, CHAIRMAN, MICHIGAN REPUBLICAN PARTY

Glitches in state databases could turn away voters

BY MARC L. SONGINI

Eligible voters in Florida may arrive at the polls tomorrow and find that they are ineligible to cast ballots because of the strict requirements for inclusion in the state's new database of registered voters.

Tomorrow marks the first time that Florida, along with many other states, will use a centralized voter database in a general election. Voter advocates said low turnout in earlier primary elections didn't provide a strong test of the new databases.

States are required to have

Databases, page 16

HP in Flap Over Offshore Support

OpenVMS users unhappy about quality of overseas help

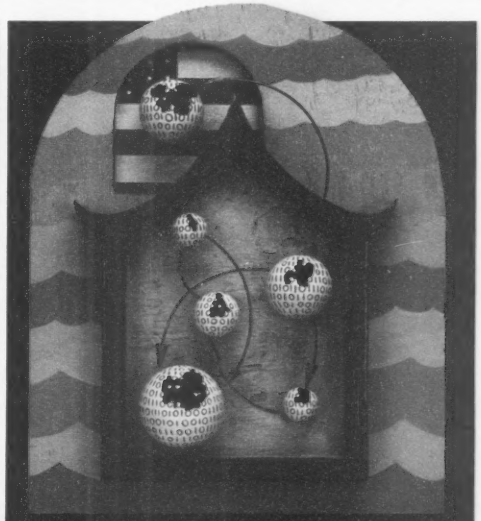
BY PATRICK THIBODEAU

Hewlett-Packard Co. began shifting some of its OpenVMS technical support offshore two months ago, a move that's drawing complaints from users and consultants who say the overseas workers don't know enough about the 29-year-old operating system.

The complaints began bubbling up on Internet newsgroups at about the same time that HP started using the offshore help. Based on comments from about a dozen OpenVMS users and consultants reached by *Computerworld* last week, the concerns are mostly focused on Level 1 support — employees' initial contact with customers to determine what their problems are and try to resolve them on a triage basis.

David Dachtera, a VMS systems administrator at a U.S. company that he asked not be identified, said that previously, he would be connected to workers at HP call centers in Colorado Springs or Atlanta

HP Support, page 49



Outsourcing China

MARIA RENDON

Looking beyond India? China's nascent IT outsourcing industry, focused mostly on the Asian market, is starting to attract attention in the U.S. Read our report from Shanghai. **PAGE 37**

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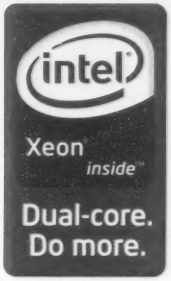


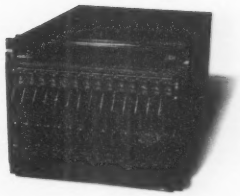
_INFRASTRUCTURE LOG

_DAY 25: They're in the cafeteria!! AAAGGGHHH!! These useless things can't work with each other. They aren't scalable. They aren't responsive. And you can't adjust new capacity on the fly. The horror.

_So many of them, I have to eat standing up. My arches are killing me. And I got avocado on my shirt.

_DAY 26: The answer: IBM BladeCenter® with Dual-Core Intel® Xeon® Processors to boost performance and balance workloads. Its self-automating features make it easy to manage, and it has more blades per chassis for a smaller footprint. The BladeCenter even opened up its specs, so the things we buy today can work with the things we buy tomorrow.

_I can eat my turkey-avocado sandwiches in peace again. Mmmmm...



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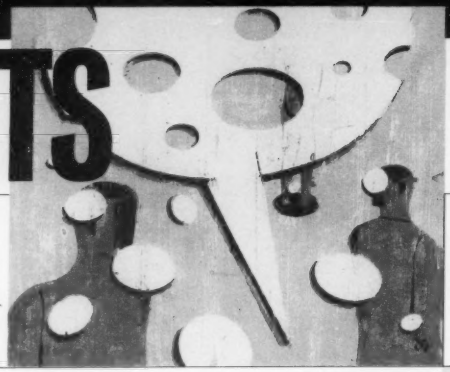
CONTENTS



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Lost in Translation
In the Technology section: Requirements management tools can make software development projects more successful by replacing Word documents and spreadsheets with a more organized process. **Page 26**

Plotting Productivity
In the Management section: When it comes to gauging IT staff performance, the jury's still out on the value of quantitative metrics versus more subjective approaches. **Page 42**

NEWS

6 **Microsoft** will recommend the use of SUSE Linux alongside Windows as part of a joint development, marketing and patent-licensing deal with Novell.

6 **VMware** is announcing a tool that creates shared server pools for application development. And rival XenSource will unveil a Windows version of its open-source virtualization software.

8 **Storage Networking World:** Users say they're getting mixed results thus far from projects to consolidate their storage systems.

10 **Users of IBM System i hardware** often don't have adequate controls for protecting the data stored on the machines, according to audits by a security vendor.

14 **Microsoft** predicts that Windows Vista will help reduce the cost of managing PCs. Not everyone is convinced.

18 **InterSystems** is set to bring out a new version of its Caché object-relational database that includes new tools for building Web and Java applications.

19 **The University of Virginia** has acquired a site license for software to give handicapped people improved access to its 3.5 million Web pages.

20 **Global Dispatches:** The Tokyo Stock Exchange has been sued by a brokerage over a botched trade that the TSE's trading system allegedly failed to cancel last December.

TECHNOLOGY

30 **Future Watch: Superstorage.** The goal of the new Petascale Data Storage Institute is to make storage more efficient, reliable, secure and manageable in systems with tens or hundreds of petabytes of data on tens of thousands of disk drives, says Ethan Miller, a UC Santa Cruz computer science professor.

32 **Security Manager's Journal: Sometimes a Light Bulb Just Turns On.** C.J. Kelly's philosophy is to let technical people use their own styles of creative problem-solving. Now she's starting to see the results of that approach.

MANAGEMENT

37 **Outsourcing in China.** Unlike India's large and thriving outsourcing industry, China's is embryonic, fragmented and focused almost exclusively on the domestic market. But a few Chinese firms have cracked the code for marketing their services to those in the West.

40 **Career Watch.** Untouchables in the workplace and how we deal with them — or fail to; IBM's efforts to promote service education; and Ireland's success in technology training on a national level.

OPINIONS

12 **On the Mark: Mark Hall** says the need to reduce data center power costs and increase app performance is pushing IT execs on Wall Street to think multicore.

24 **Don Tennant** thinks bottom-line considerations are far from the only reasons to do business with China.

24 **Bruce A. Stewart** offers examples of companies that have brought excitement back to IT.

25 **Steve Duplessie** views HP's boardroom scandal as the single blemish on what is shaping up to be stellar performance.

34 **Michael Bodetti** urges IT to inventory wireless devices to keep track of who has what.

44 **Paul Glen** cautions that one sure route to managerial failure is to start believing that you're better than everyone else.

50 **Frankly Speaking: Frank Hayes** calls on IT to end the botnet nuisance once and for all.

DEPARTMENTS/RESOURCES

At Deadline Briefs	6
News Briefs	10, 12
Letters	25
IT Careers	47
Company Index	48
How to Contact CW	48
Shark Tank	50

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SPECIAL REPORT: ELECTION 2006

How Reliable Are This Year's Voting Technologies?

Where are systems most likely to fail? *Computerworld.com* reports on the systems, vendors, controversies and potential pitfalls in each of the 50 states for the 2006 elections. Check out our coverage of these issues:

- **Technologies state by state**
- **Voting system and voter registration database vendors**
- **E-voting laws, lingo and technologies**

Visit our Web site all week for updates about Election Day IT issues.
www.computerworld.com/evoting

Review: Firefox 2.0

SOFTWARE: Mozilla's answer to IE7 isn't as strong as the latest Internet Explorer. But does it need to be? Scot Finnie takes an in-depth look at the new Firefox.
www.computerworld.com/software

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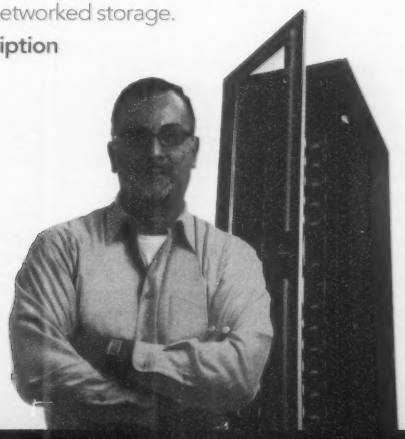

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AT DEADLINE

Kumar Gets 12 years In Prison, $8M Fine

Former CA Inc. CEO Sanjay Kumar was sentenced to 12 years in federal prison on securities fraud and obstruction of justice charges. Kumar, who resigned from CA in June 2004, after the scandal unfolded, was also fined $8 million by Judge I. Leo Grasser in a New York federal court. Kumar, who pleaded guilty to the charges in April, will remain free on bond until Grasser determines restitution for victims.

Mozilla Promises to Fix Firefox 2.0 Bug

Mozilla Corp. has pledged to fix a second minor bug found in the Firefox 2.0 Web browser. "We will fix it because we need reliability," said Tristan Nitot, director of Mozilla's European operations. No timetable has been set for releasing a patch. The company said the browser will crash if it visits a Web page that has been intentionally coded with JavaScript to target the bug. Mozilla also said the bug can't be used to steal data from a computer.

FCC Delays Vote on AT&T-BellSouth Deal

The Federal Communications Commission has once again delayed a decision on whether to approve AT&T Inc.'s proposed acquisition of BellSouth Corp. The FCC last week postponed a plan to consider the deal last Friday. The agency had also postponed a vote in mid-October. Two FCC commissioners have said they're concerned that the deal may reduce competition in the telecommunications market.

Oracle Pays $440M For Software Maker

Oracle Corp. has agreed to buy Stellent Inc., a maker of content management software, for about $440 million. Oracle said Stellent's Universal Content Management software will be integrated with its own Content Database. The deal is expected to close by early next year.

Microsoft Follows Oracle In Tighter Linux Embrace

Agrees to back use of SUSE Linux with Windows, plans joint work with Novell

BY ERIC LAI

MICROSOFT CORP. last week announced a deal to promote the use of Novell Inc.'s SUSE Linux operating system alongside Windows in mixed server environments — a move that came just a week after nemesis Oracle Corp. significantly tightened its embrace of Linux.

Microsoft isn't taking as big a leap into Linux as Oracle, which plans to clone Red Hat Inc.'s market-leading version of the open-source operating system and offer technical support to users at what it described as discount prices relative to what Red Hat charges.

Under its deal with Novell, Microsoft doesn't plan to sell or support SUSE Linux. Instead, it will recommend the software to Windows users who want to add Linux systems. It will also purchase from Novell and then distribute about 70,000 coupons annually that entitle users to a year's worth of maintenance and support on SUSE Linux. The two vendors said they will do joint development work in several technology areas, including virtualization of Windows on SUSE Linux and vice versa.

Sherwin Lu, director of application infrastructure at Le Petite Academy Inc. in Chicago, said Microsoft's work with Novell might encourage his company to eventually move to Linux. The preschool chain runs mostly Windows on its back-end systems now, although it has installed some open-source applications — most notably Red Hat's JBoss application server — on top of Microsoft's operating system.

Increased interoperability between Windows and Linux would help IT departments overseeing mixed environments by reducing the need to hire and maintain separate teams of technical staffers with different skills, Lu said.

Getting in the Game

Microsoft has taken steps toward Linux and other open-source software before, but the tie-up with Novell is its strongest admission thus far of the increasing popularity of those technologies, said Andi Mann, an analyst at Enterprise Management Associates in Boulder, Colo. "Microsoft recognized that if they didn't play nice, they might not be able to play at all," Mann said.

However, Microsoft CEO Steve Ballmer said at a press conference in San Francisco that Microsoft isn't embracing Linux wholesale. The deal with Novell "gives customers greater flexibility in ways they certainly have been demanding," Ballmer said. But, he added, "if you want something, I'm still going to tell you, 'Windows, Windows, Windows.' "

Jeremy Garcia, a Buffalo, N.Y.-based systems administrator at a telecommunications company that he asked not be identified, said before the deal was announced that Novell — not Red Hat — was the biggest loser from Oracle's announcement a week earlier.

Oracle's Unbreakable Linux plan further validated Red Hat's Linux distribution as "the enterprise standard," said Garcia, who also runs the LinuxQuestions.org Web site. "I think that will likely make selling non-Red Hat solutions more difficult," he added.

Red Hat said in a statement that with Oracle and Microsoft each increasing its focus on Linux, "the world is moving technologically in our direction." The company added that it thinks middleware and service-oriented architectures will be the key technologies going forward, not Linux itself.

Iain Gray, Red Hat's senior director of global support, claimed separately that the threat posed by Oracle is overstated. Users who run Oracle's databases, applications or both don't dominate Red Hat's customer base, Gray said.

Although some open-source advocates voiced strong concerns about Microsoft's ultimate intentions regarding the technology and users of open-source software, Linux creator Linus Torvalds was sanguine about the deal with Novell.

"I prefer to be an optimist and will happily take the option that not everybody needs to be enemies," Torvalds said via e-mail. "Let's see how it all pans out." ▸

Robert McMillan of the IDG News Service contributed to this story.

The Fine Print

Microsoft and Novell said they plan to do the following:

- Do joint development on virtualization and management of mixed Windows and Linux environments.
- Work to improve the ability of Office and OpenOffice users to share documents.
- Sign covenants not to sue each other's users for patent infringement.

Virtualization Rivals Take Divergent Paths

BY PATRICK THIBODEAU

VMware Inc. today begins its annual user conference, which the virtualization vendor expects will be attended by about 6,000 people plus some of its rivals — one of which, XenSource Inc., will announce its first commercial software release for Windows.

XenEnterprise for Windows, which is based on the Xen open-source virtualization software, is priced at $750 for a system that can hold two physical processors. The hope is that that price is low enough to "commoditize virtualization" and attract users who might otherwise turn to market leader VMware, said John Bara, XenSource's vice president of marketing.

VMware plans to announce a tool called Lab Manager that creates shared pools of servers for the development and testing of applications. Like the Windows release of XenEnterprise, Lab Manager is available for beta testing now and is scheduled to ship next month.

Contrasting Approaches

The two products represent very different approaches to attracting customers, said Andi Mann, an analyst at Enterprise Management Associates in Boulder, Colo. He said VMware is "trying to do everything" by building a set of virtualization management, migration and backup tools itself, whereas XenSource plans to develop partnerships with other vendors for such tools.

VMware developed Lab Manager at the insistence of users such as David Siles, chief technology officer for the government of Kane County in Illinois. The county's IT staff just installed the beta release of Lab Manager on a server last week and hasn't tested it enough to fully assess the new tool. But Siles said he thinks it will help both his systems administrators and his developers to be more productive.

For example, the developers will be able to set up applications in a test environment without having to ask for help from the sysadmins, Siles said. For the latter group, he added, "it's one less thing that they have to worry about." ▸

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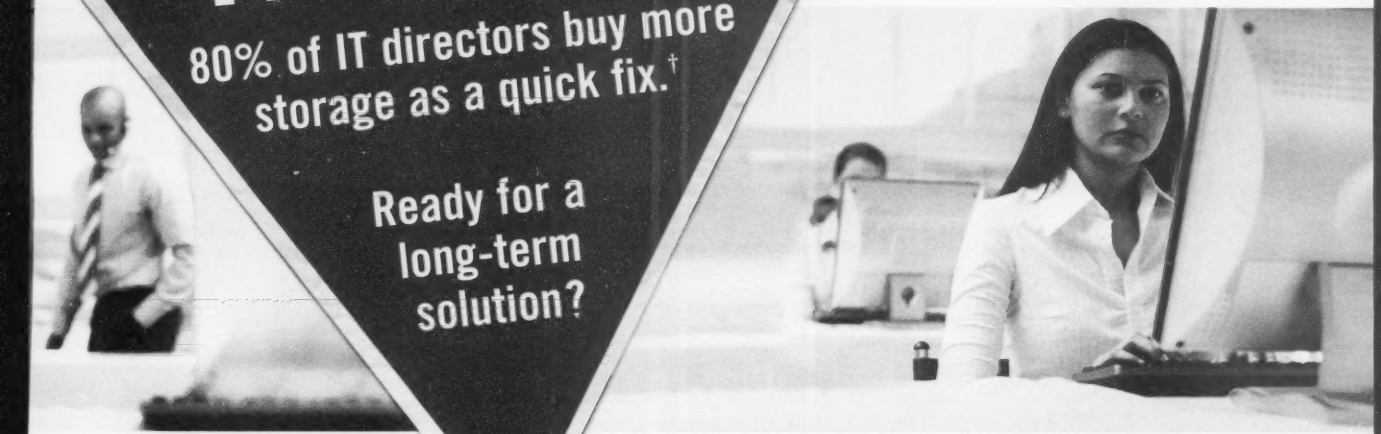

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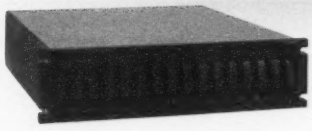

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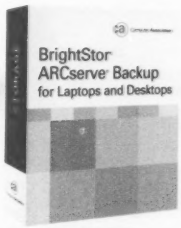

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Storage Consolidation Returns Mixed

Some users see efforts as reason to demand even more storage capacity

BY SHARON FISHER
ORLANDO

USERS AT Storage Networking World here last week said they are looking to consolidate disparate storage systems into storage-area networks (SAN) as a way to cut costs.

However, some users at the conference, which was sponsored by *Computerworld* and the Storage Networking Industry Association, said it's still too soon to tell whether such projects deliver the expected savings.

Patrick St.-Jacques, technical specialist at the Canada Revenue Agency in Ottawa, said his organization has standardized its storage operation on IBM and EMC Corp. systems. The company replaced a plethora of older devices from several vendors with EMC arrays and continues to use various installed IBM DS8000 arrays, he said.

The agency initiated the consolidation effort last December when it issued a request for proposals for a storage system to replace the multivendor offerings. The agency chose an EMC Symmetrix DMS-3 array with 750TB of storage to run alongside the installed IBM systems. Together, the EMC and IBM storage arrays provide more than a petabyte of storage capacity, St.-Jacques said.

St.-Jacques would not disclose what the agency paid for the EMC equipment, but he did note that the system hasn't yet been as cost-effective as expected.

Some users, he said, have seen the storage consolidation and the resulting increase in capacity as an opportunity to request additional capacity for themselves or their operations. In general, users at the agency are looking to increase their storage capacity by one-third, he said. In fact, St.-Jacques noted that the agency's current capacity is likely to be filled long before its projected three-year timetable, forcing it to purchase new equipment earlier than planned.

COMPUTERWORLD STORAGE NETWORKING WORLD

The 45th Space Wing of the U.S. Air Force, which manages the Cape Canaveral Air Force Station and Patrick Air Force Base in Florida, implemented a SAN four years ago. According to Glenn Exline, manager of advanced technology for Computer Sciences Raytheon, which manages the unit's computer systems, it has proved cost-effective.

The groups consolidated on EMC Clariion storage arrays with a capacity of 36TB, Exline said. The new system allowed the unit to consolidate its tape library configuration, which has saved it about $300,000 in tapes and tape-handling fees, he said.

ASA MATHAT

A SAN proved cost-effective for a unit of the Air Force, says Raytheon's EXLINE.

A merger of the Northumberland-Clarington and Peterborough County school districts, both in Ontario, included the consolidation of storage systems, said Anthony Brice, manager of technical systems at the Kawartha Pine Ridge School in Peterborough.

The merger was undertaken following an Ontario Ministry of Education mandate several years ago that school district mergers be considered as part of an effort to cut local taxes.

Two to three years after initiating the merger, the combined district in September 2005 installed a single Thunder 9570V midrange modular storage array from Hitachi Data Systems Corp., said Brice.

Brice, who is in the process of doubling the combined system's 3TB storage capacity, said he has also found that savings can be elusive.

Some users, such as Tracy McGee, an enterprise systems engineer at the Tulsa, Okla., public school district, are still looking at options for consolidating storage systems.

McGee said the school system currently runs arrays from various vendors, including EMC, Hewlett-Packard Co. and IBM. McGee said she expected to begin working on a request for proposals soon.

Bank of America Corp. has turned to HP's AppIQ storage resource management software in an effort to better utilize existing storage systems and control storage growth, said John Becsi, vice president and technical manager of systems engineering, architecture and analysis at the Charlotte, N.C.-based company.

ASA MATHAT

Bank of America turned to storage resource management software, says BECSI.

In a session at the conference, Becsi wouldn't estimate how much the bank has saved by using the software but said significant sums can be saved by reducing storage growth.

Mark Shirman, president and CEO of GlassHouse Technologies Inc., a consulting firm in Framingham, Mass., said that consolidating mixed storage environments can be very cost-effective.

Sites running storage products from multiple vendors in many cases require separate support staffs, procedures and training programs, he said. "If you've got 10 vendors, you've got 10 armies of people to take care of them," Shirman said.

Storage consolidation can save money in the long term by reducing the amount of staffing expertise and training required, he added. ▸

Symantec Adds CDP to Backup Exec

ORLANDO

SYMANTEC CORP. last week unveiled new versions of its Backup Exec, Ghost Solution Suite and AntiVirus software that add support for Microsoft Corp.'s next-generation Windows Vista operating system.

The new offerings were introduced during the Storage Networking World conference held here.

Backup Exec 11d, backup and recovery software for small and midsize businesses, also includes continuous data protection for Windows file servers and Microsoft Exchange, along with encryption capabilities.

The CDP capabilities piqued the interest of Rochelle Adsitt, an IT specialist and storage administrator in training for the municipal government of Pierce County in Tacoma, Wash. "We have customers who don't like to lose data," she said.

Adsitt helps manage a shop that runs a SAN from Hewlett-Packard and a tiered storage infrastructure that includes a JBOD (just a bunch of disks) enclosure for disk-to-disk server backup.

About a year ago, the county rolled out Symantec's LiveState Client Management Suite, which offers CDP down to bare metal restores, Adsitt said.

"It's bad enough recovering data without having to worry about server [operating systems] too," she said.

"Encryption and CDP are big issues for us," said Jim Ward, a storage administrator at Reston, Va.-based SLM Corp., better known as Sallie Mae. "Obviously, any publicly traded company is going to be concerned with losing data."

Sallie Mae manages a 60TB Fibre Channel SAN and a 185TB open-systems SAN. Ward uses Symantec NetBackup and wants to see Symantec add both CDP and encryption to that high-end backup and recovery offering as well.

Symantec officials have said that they will add CDP capabilities to NetBackup at some point in the future but have not disclosed a delivery schedule.

Backup Exec 11d also adds point-in-time recovery for Microsoft Exchange, SQL Server, SharePoint and Active Directory, along with support for IBM DB2, Oracle RMAN/RAC, Mac OS X, HP-UX, Linux and the Network Data Management Protocol, a standards-based file-sharing protocol used on Network Appliance Inc. network-attached storage arrays.

Jim Damoulakis, chief technology officer at GlassHouse Technologies, said that although Backup Exec 11d is not unique in its ability to offer CDP for Exchange, it does offer the broadest functionality across multiple applications.

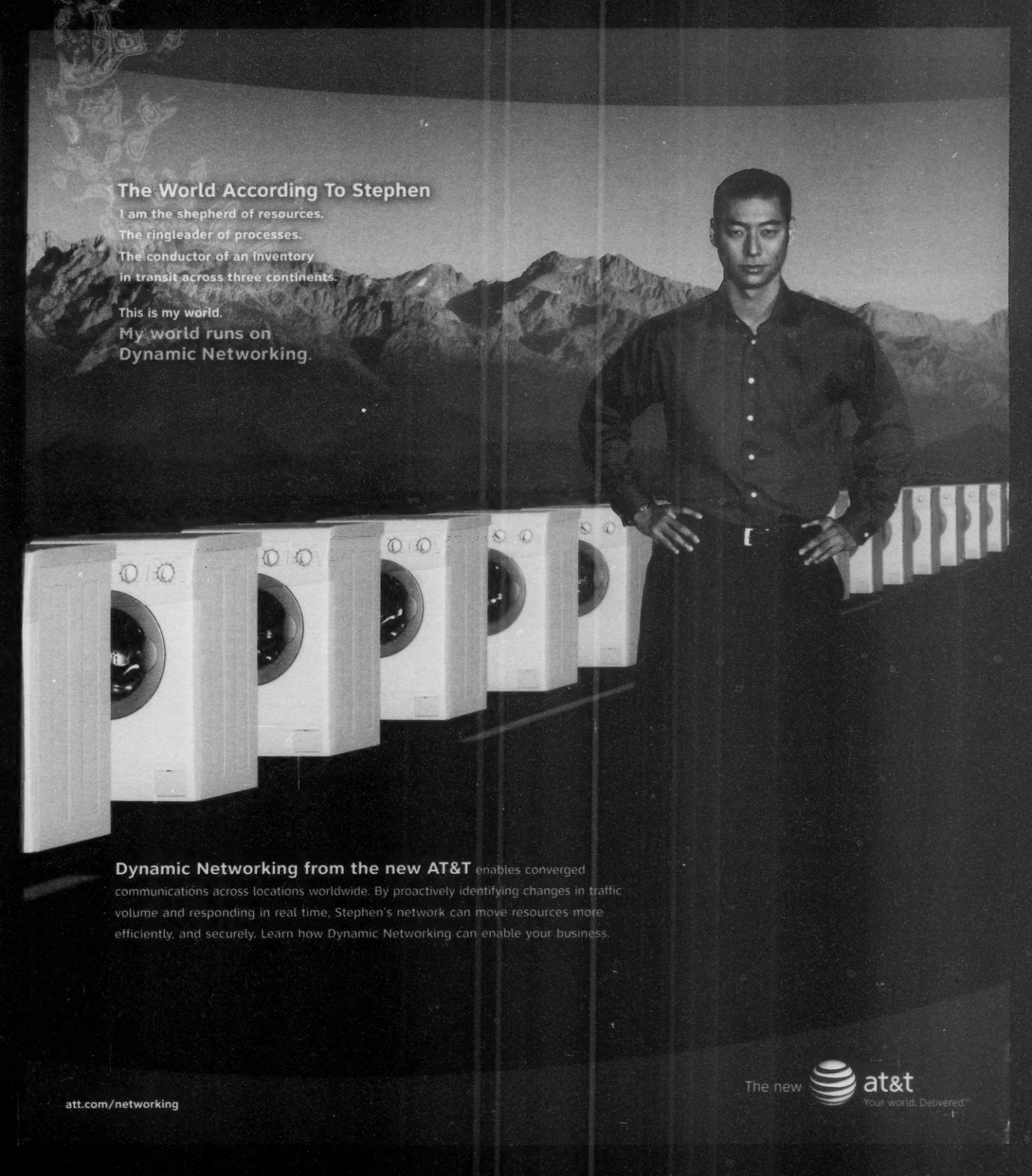
"The only problem is that [Symantec] NetBackup still doesn't offer these features," he said.

Symantec also announced at the conference Version 2.0 of its Ghost Solution Suite enterprise imaging and software deployment application with support for 64-bit Windows servers.

The new version of Ghost Solution, which adds support for preconfigured RAID arrays, will ship on Nov. 30. It comes with a central management console for ease of use, Symantec said.

Version 10.2 of the Symantec AntiVirus software will roll out over the next month, said Pat Hanavan, Symantec's senior director of product management. The new version supports Vista.

– LUCAS MEARIAN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BRIEFS

Microsoft Confirms Visual Studio Bug

A vulnerability in Visual Studio 2005 could let an attacker execute code on a targeted Windows machine, Microsoft Corp. said last week. Security vendor Secunia APS rated the vulnerability as "extremely critical," noting that there are unconfirmed reports that it is being exploited. Microsoft said that proof-of-concept attack code has been published and that it may issue a patch after its investigation into the vulnerability.

Former McAfee Exec Settles SEC Case

A former senior financial officer at McAfee Inc. has agreed to pay $757,000 to settle charges filed by the U.S. Securities and Exchange Commission. The SEC charged Eric Borrmann with taking part in a multimillion-dollar fraud scheme from 1999 until he left the company in 2000. The settlement prohibits him from working as an officer or director of a public company for five years.

AMD Seeks Intel Documents in Suit

Advanced Micro Devices Inc. has asked a U.S. court in Delaware to compel Intel Corp. to disclose documents about its activities outside the U.S. as part of an ongoing antitrust lawsuit. AMD has charged that Intel used offers of exclusive deals and threats of price increases to maintain a monopoly in the worldwide market for x86 microprocessors between 2001 and 2005. AMD filed the complaint in June 2005.

Ingres Adds Linux Version of Database

Ingres Corp. will begin shipping in about two weeks a beta version of its new Project Icebreaker software, which combines the company's open-source database with a version of Linux from rPath. The final version will ship by the end of the year. Ingres said it is in talks with hardware vendors about preinstalling the software on their servers.

Users of IBM's Midrange Line Fall Short on Security Controls

Execs, analysts back up report finding lax processes for securing System i

BY JAIKUMAR VIJAYAN

IBM'S SYSTEM i computers — originally known as the AS/400 and then the iSeries — have long enjoyed a reputation for rock-solid reliability. But poor security practices by many IT managers are making the midrange systems vulnerable to compromises, according to a report released late last month.

The PowerTech Group Inc. in Kent, Wash., said it audited 188 System i machines at more than 175 user sites over the past 12 months. Those audits showed that many of the midrange systems weren't supported by internal controls that adequately protect their data, said John Earl, PowerTech's chief technology officer.

For instance, more than 90% of the audited systems had no controls in place for preventing or auditing changes to the underlying data from an external PC, Earl said. In addition, 95% of the systems had at least 10 users with complete root-access authority, and 77% of them had more than 20 users with passwords that were the same as their usernames, according to Earl.

The results aren't materially different from earlier surveys that PowerTech conducted in 2004 and 2005, showing a continuing lack of user attention to System i security, Earl said.

Little Surprise

The latest survey results came as little surprise to some IT managers and analysts, who said the System i's vaunted security features may have fostered a sense of complacency within some IT organizations.

"By default, the System i is a very secure platform," said John Thiers, an IT security architect at Shell Canada Ltd. The systems are also much more self-sufficient from a management standpoint than other servers are, Thiers said. "So it's easier to miss some of the exposures that might exist on a System i," he explained.

Meanwhile, the opening up of the servers by IBM "and the pervasiveness of TCP/IP on the System i have made them a lot more exposed than they used to be," Thiers said.

"Anything that is connected to a broader network today faces much greater threats than the systems that were installed 20 years ago," said Randy Dufault, president of Common, the System i user group. Dufault works as a consultant at MBS Technologies Inc. in Minneapolis.

Getting Better

Recommended actions for improving security controls on IBM's System i product line:

- Document and enforce separation of duties for administrator-level users, and log their activities.
- Review end-user access levels and ensure that they are appropriate to job responsibilities.
- Record important system events in a security audit journal.

SOURCE: THE POWERTECH GROUP INC., KENT, WASH.

Among the most significant changes that the System i has gone through since being introduced as the AS/400 in 1988 is the addition of support for services like FTP, Open Database Connectivity (ODBC) and Java Database Connectivity.

"In the initial days, the box was very proprietary and people didn't worry about outsiders getting into the data," said Robin Tatam, senior System i security engineer at MSI Systems Integrators Inc. in Omaha. "Over the years, customers have screamed for more open access through FTP and ODBC, and IBM has delivered." But that has made the System i more vulnerable to compromises in the absence of proper controls, he added.

For example, it didn't matter if most of the end users on a green-screen AS/400 had administrator-level access, because they were limited in what they could do, Tatam said. But services such as FTP and ODBC allow anyone with a user profile on a System i to access its built-in database from a PC, Tatam noted.

As a result, he said, "it's very, very important that enterprises get a handle on the level of access that people have on these systems." ▸

IT Needs to Take Proper Precautions, Says IBM Exec

IAN JARMAN, IBM's System i product manager, spoke with *Computerworld* last week about the annual security study conducted by The PowerTech Group. Excerpts from the interview follow:

One of the biggest takeaways from PowerTech's study was that people responsible for managing System i machines don't appear to be securing them as they should. Is that your assessment as well? The System i is very well respected for its integrated security. We've never had a reported virus on the System i. But in the same way that you have to lock your doors and windows at home, you certainly need to be making sure that you're taking the necessary security precautions.

So why aren't more users of the System i doing that? People looking at security very often are concerned about systems that are affected by viruses, network security [issues] and so on. It's sad to say that sometimes they don't necessarily put the same emphasis on the back-end system, and that is an important priority as well. It's also reasonable to reflect that security policies, practices and compliance requirements [have] changed so significantly that all companies running System i or any other platform ought to be periodically reviewing their practices.

Who is responsible for securing the System i environment – the IT operations team or the IT security group? That varies considerably with the size and type of company. For example, there are 16,000 banks running on System i – obviously, security is a top priority for them. In many of those banks, there will be a security team working in cooperation with the different operating platform teams. If you look at more traditional smaller to midsize companies, you probably would find that they have the System i operations teams in charge of security.

PowerTech also found that projects involving System i security often aren't given the proper priority because the system is assumed to be secure. Do you agree? It's fair to say that System i has always had a very strong reputation for security and availability. As a result, perhaps some resources get focused on fighting fires and plugging holes elsewhere, where there have been more problems. It's sometimes a challenge to raise the priority where there isn't necessarily a perceived problem.

–JAIKUMAR VIJAYAN

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Microsoft

BRIEFS

Flessner to Leave Microsoft Post

Paul Flessner, who helped Microsoft Corp. develop SQL Server 2005, plans to resign. Flessner, vice president of the data storage and platform division, will leave on Jan. 1 to pursue personal endeavors, a spokeswoman said. He will continue to work part time. Ted Kummert, a corporate vice president who heads the security, access and solutions division, will assume Flessner's responsibilities.

EMC Buys Storage Software Maker

EMC Corp. has agreed to acquire Avamar Technologies Inc. for $165 million. Avamar makes software that helps companies ensure that they back up each data segment only once, a process known as deduplication. Avamar uses EMC Clariion servers as a target for disk-based backups and EMC Centera servers for long-term archiving, according to EMC.

Vendors to Create Battery Standard

A group of laptop vendors and battery manufacturers plans to announce a standard for making safer lithium-ion batteries by June 15, 2007, said IPC, the Association Connecting Electronics Industries. The vendors, including Apple Computer Inc., Fujitsu Ltd., IBM and Toshiba Corp., hope the standard can help them recover from a series of massive battery recalls. The standard will cover all forms of rechargeable lithium-ion cells, IPC said.

Sun Ships New NetBeans Version

Sun Microsystems Inc. has released NetBeans 5.5. The latest version of its open-source Java integrated development environment adds a Java Persistence application programming interface and a Java API for XML Web Services 2.0 tools. It also includes a graphical user interface builder code-named Project Matisse.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

MATTHEW FAULKNER

Wall Street Paves The Way for . . .

. . . multithreaded applications to cap power demand in data centers. It doesn't surprise Steve Pawlowski, chief technology officer and a senior fellow at Intel Corp., that financial services firms are ahead of the game in turning applications written for serial processors into multithreaded programs for the new CPUs housing two or more cores. For one thing, they have the money to do it, observes Pawlowski, noting that 60% of corporate profits in the U.S. last year came from financial services firms. (He spoke two weeks ago at the Venture Northwest conference in Portland, Ore., where venture capitalists trotted out start-up vendors, generally seeking a second round of investments from other VCs.) However, despite the gobs of money Wall Street firms rake in, Pawlowski says there are limits to their IT budgets. The amount they want to spend on electricity is one of them. When he visits financial services CIOs, "power is sometimes the first word that comes out of their mouths," he says. "IT can't bring any more power into the data center." As a result, Intel has been forced to shift from looking at raw performance in its processors to tracking the new equation of performance per watt. At the same time, Pawlowski says, IT execs are informing him that next-generation applications will include "computationally expensive" XML data streams. In other words, they need even faster machines that run much cooler. That can only be achieved through multicore technology, he says. Pawlowski claims that his engineering team can build a 64-core processor with high performance per watt, but he says that Intel couldn't sell it because the apps aren't there to leverage such a device. Yet.

100 GFLOPS of PC performance in 2009, says Intel.

Following Microsoft's money leads to . . .

. . . a curious destination. Also speaking at Venture Northwest was Matt Mulligan, a director within Microsoft Corp.'s emerging business team, which invests in and/or acquires other companies. In the past five years, Microsoft has bought 85 companies. "Our acquisition rate will increase," Mulligan predicts. Given the pots of cash in Microsoft's vault, that's no surprise. However, where it is investing those billions of dollars might surprise you. Instead of looking at companies that support fat-client software and tools, Mulligan says, Microsoft is focusing on software-as-a-service vendors that use products such as SQL Server and Exchange Server. That reflects "a mindset change" at Microsoft, according to Mulligan, who claims that the company has banished the not-invented-here syndrome.

26 acquisitions made by Microsoft in fiscal 2005.

Take 2: Wall Street paves the way . . .

. . . for multicore applications. Although he wasn't in Portland for Pawlowski's speech, Kurt Ziegler, executive vice president of development at Aspeed Software Corp. in New York, agrees that financial services firms are beginning major revisions of their application portfolios to take advantage of multicore processors. Ziegler says his company's Accellerant software analyzes source code, finds all the relationships among the code segments and then determines the best places to "parallelize" a program. Accellerant works with apps written in C, C++, C#, Java, Visual Basic and Fortran. Ziegler claims that it will even create parallel execution routines in packaged apps like Excel. In Accellerant 4.3, an upgrade due next month, the software will get improved memory management capabilities. Pricing is implementation-specific.

ZIEGLER: Turn today's apps into tomorrow's parallel programs.

Next, you may need to hang mirrors . . .

. . . outside all of your conference rooms. Blame it on the kids, suggests Stephen Von Rump, CEO of Be Here Corp. in Fremont, Calif. He's talking about the anticipated arrival of videoconferencing technology in meeting rooms everywhere. "The generation coming into the workforce expects visual information," Von Rump says. Studies done at University of California, Los Angeles, in the 1970s revealed that people retained the most information when getting it visually as opposed to only hearing or reading it. Be Here's TotalView camera gives participants in two locations 360-degree scenes of each other's meeting areas by letting them plug as many as four laptops into the Ethernet ports on the device. Participants can share screens and set their views independently of the conference leader. However, the leader can limit access to callers as necessary, Von Rump says. TotalView is compatible with almost any voice-over-IP private branch exchange. TotalView should be available through integrators in Q1 of next year; pricing will start at about $2,000. Von Rump says that AT&T Inc. added the pound sign to dial pads in the 1960s as a way for consumers to initiate video calls. Maybe videoconferencing's time has finally come.

TotalView gives 360-degree views of meeting rooms.

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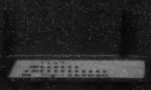

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IT Cost Savings at Issue On Upgrades to Vista

Microsoft expects new OS to reduce tab for managing PCs; others are skeptical

BY ERIC LAI

As Microsoft Corp. prepares to release Windows Vista to manufacturing this week and make it available to corporate users at the end of the month, the debate is ratcheting up over how much money companies could save — if any — by upgrading to the new software.

For most businesses, the cost of licensing Windows is dwarfed by what it costs to manage the operating system and the applications running on their PCs. The bulk of those expenses comes from paying the salaries of IT staffers, according to analysts.

Microsoft claims that enhancements in Vista, such as tightened security, more powerful installation tools and improved central management capabilities, will enable companies to sharply cut the amount of time it takes to maintain PCs. That should lead to big savings, the software vendor predicts.

Lee Nicholls, a senior technology adviser at Microsoft systems integrator Getronics NV, said calculating the potential total cost of ownership savings from an upgrade to Vista can be difficult. He added that operational costs likely will go up immediately after an upgrade because of the need for additional end-user support from help desks.

TAYLOR: Predicted cost savings from Vista upgrades will turn out to be "funny money."

Nonetheless, Nicholls said that based on Getronics' experiences in helping 10 large companies deploy Vista for beta testing, users can save almost $320 per PC annually.

But Robert Taylor, CIO of the Fulton County government in Georgia, said he thinks that such savings estimates likely will turn out to be little more than "funny money" for organizations like his with lots of full-time IT staffers.

"We manage 6,000 desktops and 1,500 laptops," Taylor said. "At $300 per PC per year, that should add up to $2 million in savings. The only way we could actually save that would be to eliminate 30 people, which we're not going to do."

On the other hand, Taylor, whose staff has been testing Vista on 100 PCs for more than 18 months as part of Microsoft's Technology Adoption Program, agreed that many of Vista's capabilities will boost automation and manageability, freeing up his staff's time for more valuable projects.

For example, he pointed to Vista's beefed-up image management service, which will let systems administrators create personalized clone backups of PC configurations and then remotely reinstall Vista and all applications on end-user systems if necessary.

Taylor said his staff will be able to avoid driving to 200-plus buildings in the 530-square-mile county, which includes Atlanta, to reinstall Windows and other software.

He also applauded Vista's User Access Control feature, which strips users of administrator privileges. That should be a major deterrent to spyware problems, Taylor said. He said he plans to start rolling out Vista as soon as possible and expects the county to finish upgrading all of its PCs by the end of next year.

Gartner Inc. analyst Michael Silver said there are big "ifs" in the cost-savings picture painted by Microsoft and Getronics. For example, Silver expects many end users to resist having their software installation privileges and other administrative rights taken away. Even if IT managers succeed in doing so, he said, it could result in more work in other areas for their staffs.

"You'll have knowledge workers calling you every 10 minutes to install some piece of software," Silver warned.

In addition, many companies already use third-party security and image management software with Windows XP, he said. With all those factors in mind, Silver said he thinks that only in the most aggressive scenarios, such as companies that upgrade unmanaged XP systems to well-managed Vista ones, will IT managers be able to realize annual savings of about $200 per PC. And that figure excludes some migration costs and the price of software licenses, said Silver. ▸

Undisclosed Flaws Undermine IT Defenses

Users, analysts say companies need to be able to contain surprise attacks

BY JAIKUMAR VIJAYAN

Attacks targeting software vulnerabilities that haven't been publicly disclosed pose a silent and growing problem for corporate IT. But responses to such threats have been largely misguided because of misconceptions about them, according to some analysts and security vendors.

So-called zero-day exploits are generally defined as attacks that target publicly known but yet to be patched vulnerabilities. The dangers of such attacks are obvious, said Alan Shimel, chief strategy officer at StillSecure, a vendor of network security software in Superior, Colo. But, Shimel said, it's equally important that companies be prepared to deal with undisclosed vulnerabilities, or "less-than-zero-day" flaws, that are unknown to anybody but attackers.

Typically, such flaws are discovered by security researchers only after they have been successfully exploited by attackers, Shimel said, adding that companies tend to continue relying on patches to address security problems instead of putting multilayered defenses in place. "It's time to put the emphasis back on the unknown attacks out there," he said.

Hard to Block

In most cases, blocking such attacks is very hard because of the fact that the vulnerabilities are unknown, said John Sullivan, chief technology officer at Atlas Group Inc., a Kennebunk, Maine-based telecommunications consultancy. "Someday you're going to miss something, and someone is going to get in using an exploit no one knows about," Sullivan said.

Therefore, the emphasis has to be on detecting and containing the fallout from any attacks to the greatest extent possible, he added. That requires multiple layers of defenses not just at the network perimeter but behind it as well, according to Sullivan, who recommended the use of security measures such as strong user and device authentication, strict role-based access controls, network segmentation and data encryption.

Robert Bagamery, a system support specialist at a large Canadian utility that he asked not be named, said it's also a good idea for companies to have a tightly controlled "whitelist" of approved Web sites and Web-based applications for their end users. IT managers should restrict access "to only necessary and dependable sites," he said.

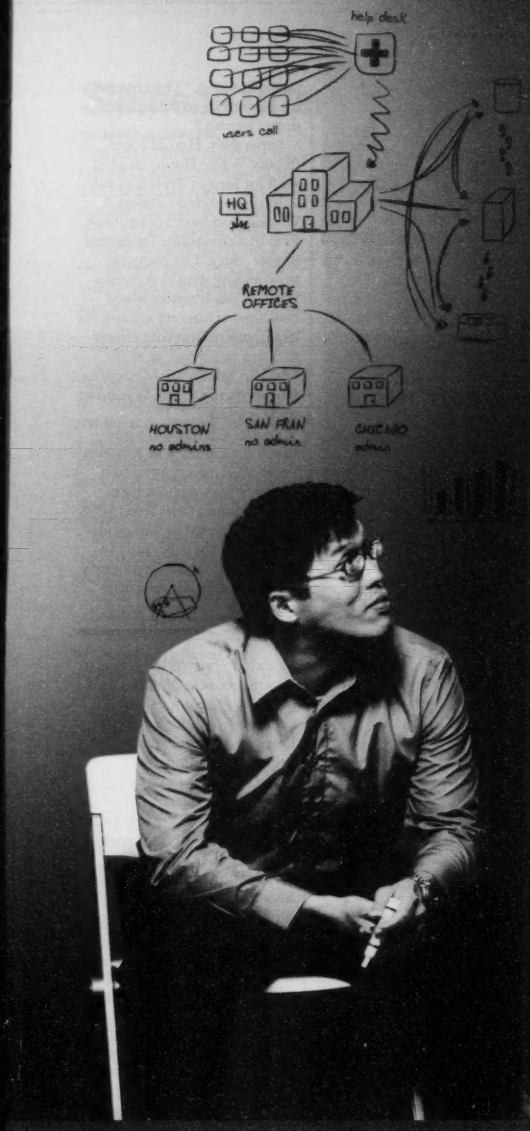
Gartner Inc. analyst Amrit Williams said much of the confusion about what constitutes a zero-day threat stems from the manner in which some security vendors have used the term when pitching their products. "Whatever nomenclature is used, there is a whole class of basically unknown exploits taking advantage of unknown vulnerabilities," Williams said.

Beyond Patches

- Focus on early detection via network traffic analysis and behavior-modeling tools.
- Use "whitelisting" approaches to keep out all but approved applications and online services.
- Emphasize damage control via network segmentation, plus strong access controls and user and device authentication.

But the reality is that most organizations "aren't experiencing pain" from less-than-zero-day attacks, he added. For now, the biggest pain point for IT managers continues to be publicly disclosed flaws for which no patches are available, according to Williams.

One well-known example was the Windows Metafile flaw that Microsoft Corp. disclosed and hurriedly patched early this year. "Most companies don't know how to deal with situations where patches don't exist," Williams said. ▸



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Continued from page 1

Microtargeting

of technology, said the Democratic Party's data quality problems in 2004 included a database with a list of Colorado voters that contained more names than the total population of the state. Also, some Florida voters were listed in the database as living in the city "Fort" and the state "Lauderdale," Self noted.

"We had some significant problems in 2004 that required us to start [rebuilding] technologically from ground zero," he said. "We have spent a significant portion of our time revamping the entire national database from the ground up."

As it began anew, the DNC was able to take advantage of emerging technologies, such as a data warehouse appliance from Netezza Corp. in Framingham, Mass., Self said. The committee replaced a MySQL open-source database with a dedicated device that includes high-performance hardware with database, storage and other software, he said.

The Netezza appliance allows the DNC to process the 200 million files — one for each voter — and 900 fields for each file 20 times faster than it could in the past, Self said. Since the overhaul, the DNC has increased the number of high-quality phone numbers in its database by 20%, he said.

The committee has also installed data modeling tools from SPSS Inc., data quality tools from Firstlogic Inc. (acquired by Business Objects SA earlier this year), and extract, transform and load tools from Sunopsis SA (acquired by Oracle Corp. last month).

'Secret Weapon'

The Republicans' expertise in microtargeting — appending consumer-based information to the demographic and voting history in a voter database — was important in the 2004 election and will be even more crucial in tomorrow's elections if the outcomes are as close as expected, said Mike Connell, president, chief political strategist and CEO of New Media Communications Inc. in Richfield, Ohio.

Connell worked with the Bush/Cheney campaign on Internet strategy in 2000 and 2004. His company works for the RNC.

"In one regard, [microtargeting] is probably hands down the single most important secret weapon that the Republican Party has right now," Connell said. "We're going to find out here in just a few days what that counts for."

In Michigan, for example, Republican volunteers are canvassing door to door in Detroit for the first time since 1962 because microtargeting has identified 44,000 traditional Democratic voters who are likely to side with Republicans on social issues, said Saul Anuzis, chairman of the Michigan Republican Party.

ANUZIS: Microtargeting identifies potential crossover votes.

Before the use of microtargeting, the party would not campaign in areas of the state where less than 50% of the people voted Republican, Anuzis said. "Now, we literally target household by household," he said. "Michigan is a swing state, and [we] cannot afford not to talk to every single potential voter in the state."

The RNC did not respond to an interview request by press time.

For its part, the DNC has launched a microtargeting pilot effort in six states using its new IT equipment, Self said. He declined to identify the states but said, "The changes we have made are making a direct impact."

Separately, Harold Ickes, deputy White House chief of staff for former President Bill Clinton, founded Catalist, a Washington-based consulting firm that maintains Democratic voter data. The company is providing data to America Votes, a Washington-based coalition of interest groups, for use in microtargeting efforts that are independent of the DNC, in Michigan, Minnesota, Pennsylvania, Ohio, Wyoming and Colorado.

Daniel Castleman, a political data analyst at America Votes, said his organization — which uses development and modeling tools from SPSS — has been able to "surgically target" voters, especially in rural areas, where Democrats have traditionally had little success.

Microtargeting, Step by Step

- Acquire traditional demographic voter data like name, address and voting history.
- Conduct a poll to find groups of people with similar opinions on issues like religion, taxes or gun ownership.
- Use modeling tools to add consumer data, like buying behavior, to the poll results.
- Next, use modeling tools to identify patterns that can be used to identify large groups of voters throughout a state who are likely to vote a certain way. For example, one result of microtargeting is that Republicans are likely to drink bourbon, while Democrats favor gin.
- Assign volunteers to call or visit those whose tastes indicate that a vote for that party's candidate is likely.

Continued from page 1

Databases

a repository of statewide voters under the 2002 federal Help America Vote Act. In the past, these lists of eligible voters were compiled mostly by local governments. The new centralized databases are governed by rules created by state elections officials following HAVA guidelines.

Ben Wilcox, executive director of Common Cause Florida, a nonprofit advocacy group in Tallahassee, said officials in many states are anxious about how the relatively untested databases will function in a full-scale election.

"I think the cause for concern now is that it's new," said Wilcox. "The primary election back in September had a very low turnout. We were hoping for a higher one to put the database to a good test. Going into the general election, there is still concern that people may show up to vote and not find themselves on the rolls."

Adding to the challenge in Florida is a strict policy requiring that new-voter information exactly match that person's information in other state databases, such as that used by the Department of Highway Safety and Motor Vehicles, said Dianne Wheatley-Giliotti, president of the Tallahassee-based League of Women Voters of Florida.

SANCHO: Technology training a potential issue.

If a Florida resident is identified as "Bill Smith" in one database and "William Smith" in the other, the voter won't be allowed to cast a ballot, she said. Voters who haven't been validated won't necessarily know until they arrive to cast their ballots.

Some, but not all, ineligible voters have been sent warnings, but those notes don't specify which information on their registration forms is incomplete, Wheatley-Giliotti said.

Ion Sancho, head of elections in Leon County, Fla., said the problem could be compounded in some counties where IT personnel are unfamiliar with the statewide database technology.

The voter database previously used in Leon County was based on the same technology in the new statewide database, so IT personnel there can fix glitches, Sancho said. "Other counties don't know all the ins and outs," he noted.

Justin Levitt, associate counsel with the democracy program at New York University School of Law's Brennan Center for Justice, predicted that database problems are likely in a number of states, such as Florida, North Carolina and South Dakota, which require that new-voter information exactly match data in other state repositories.

Levitt also noted that a study of HAVA's voter registration requirements by the Brennan Center found that the databases were quickly created in many states, leaving IT workers little time for training.

"We worry that people will only find out on [Election Day] that they are ineligible to vote," Levitt said.

Bob Fitrakis, an independent candidate for governor of Ohio, fears that a sizable number of voters have been unknowingly purged from the statewide database there, according to his campaign manager, Paddy Shaffer. The fears were prompted by the use of outdated registration forms in several counties, Shaffer said.

A spokesman for Ohio Secretary of State Kenneth Blackwell did not respond to requests for comment.

In Ohio, said Levitt, eligibility practices are unclear. "Where systems are less transparent, there's greater reason for concern," he said.

A spokeswoman for Florida Secretary of State Sue Cobb downplayed concerns about the new voter database, noting that no one will be turned away from Florida polling places. "If you are not on the registration rolls, you are able to vote [using] a provisional ballot," she said. "The voter has three days to bring in documentation that confirms that they are a registered voter."

The Florida database was created under HAVA guidelines, the spokeswoman said. Following the Sept. 5 primary election, supervisors were "very pleased" with the new Florida Voter Registration System, she said.

Wheatley-Giliotti called the provisional ballot another stumbling block for an ever-diminishing pool of voters to overcome.

Siemens Offers Software for Managing Wireless LANs

BY MATT HAMBLEN

Siemens Communications Inc. last week announced software designed to let corporate users manage thousands of wireless LAN access points from a single console and to ease the integration of third-party mobile services with business applications.

In addition to supporting third-party links, the HiPath Wireless Manager software can be extended via a pair of so-called Advanced Services modules — one that provides wireless intrusion-prevention capabilities and another that generates reports on the regulatory compliance of wireless networks.

Michael Dye, director of information systems at Midwestern State University in Wichita Falls, Texas, said the school's 6,200 students have had access to a campuswide Wi-Fi network based on 60 Siemens access points for five months.

The university has been using an early version of HiPath Wireless Manager since the Wi-Fi network was installed, according to Dye.

Midwestern State also took part in a trial run of a new Siemens partner program in order to help it integrate security products from Fortinet Inc. with HiPath Wireless Manager, he said.

The school plans to expand its use of the HiPath software to manage a separate Wi-Fi network for faculty and staff members that is due to come online sometime next year. "That way, nary the two networks should meet," Dye said.

Monitoring Capability

Steven Snider, president of Cadre Information Security, a Cincinnati-based reseller and systems integrator that is a Siemens business partner, said HiPath Wireless Manager will be able to monitor networks that serve dual-mode phone users who combine cellular and Wi-Fi calls.

"In the past, you've had departmental or buildingwide Wi-Fi, but very few solutions could look at the entire wireless management," Snider said.

HiPath Wireless Manager is available now, starting at $1,500 for a license that supports a single server and as many as 200 access points.

The Advanced Services modules were announced last April under the name HiPath Wireless Manager Advanced, said Luc Roy, vice president of product planning and marketing at Siemens Communications, a Boca Raton, Fla.-based subsidiary of Siemens AG.

Roy said that the earlier offering has been split into separate products called HiGuard, for intrusion prevention, and HiGuard Reporting, for regulatory compliance.

ONE NATURAL RESOURCE IN ONTARIO
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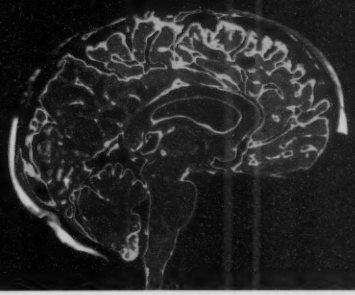
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InterSystems Updates Caché Database

BY ERIC LAI

InterSystems Corp. hopes that Caché 2007, the newest version of its object-relational database, will help it expand its customer base beyond its health care niche.

About 80% of the Cambridge, Mass.-based company's customers are in the health care business, officials said.

The update to Caché, set to be unveiled next week, includes Zen and other tools for Web and Java developers.

Zen, an Asynchronous JavaScript and XML (AJAX) framework for creating data-intensive Web applications, includes dozens of prebuilt components, said Paul Grabscheid, vice president of strategic planning at InterSystems.

The new version also adds Jalapeño, a tool for developing objects that persist in the database by eliminating the usual object-relational mapping layer, Grabscheid said.

Improving Efficiency

Jim Klein, chief technology officer at QuadraMed Corp., expects that Zen will allow the health care software supplier's 200 developers to write code 20% to 40% faster than they currently can. "Zen will allow my developers to tackle things we wouldn't have wanted to tackle before," he said.

More than 100 of Reston, Va.-based QuadraMed's hospital clients run Caché as part of the QuadraMed platform.

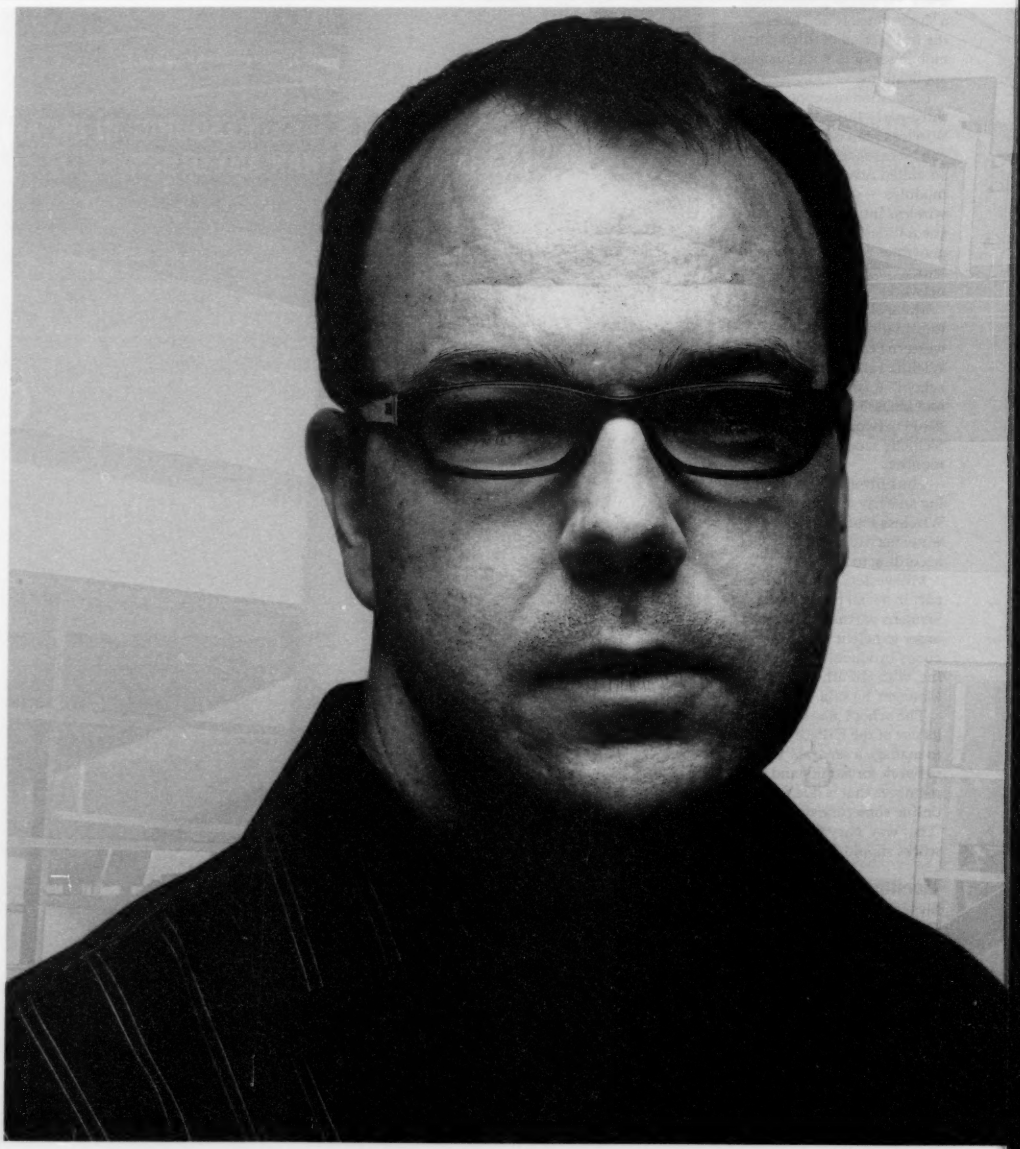
Dana Gardner, an analyst at Gilford, N.H.-based Interarbor Solutions LLC, said Zen "provides a shared-objects benefit for the server and client that balances the chattiness of AJAX apps with performance demands on the server."

InterSystems hopes the updated offering can woo new customers like Digital Technology International Inc., a developer of software for the newspaper industry that plans to install the new Caché version.

Zen "is the simplest AJAX we've ever seen," said Don Oldham, CEO of DTI, whose annual sales total about $35 million. "We're fond of Adobe, and so we looked long and hard at [its] Flex [development tool]. But it's still a traditional middleware approach, which we think is cumbersome."

DTI is switching all 260 of its newspaper clients from Sybase Inc.'s Adaptive Server Enterprise to Caché, which Oldham said should boost runtime performance about tenfold.

Curt Monash, an independent research analyst in Acton, Mass., said that Caché's "advantages are, in most markets, nice to have, not must-haves," even with Caché's latest updates.



U.Va. Aims to Improve Accessibility of Web Site

BY LINDA ROSENCRANCE

The University of Virginia plans to install software that can convert its 3.5 million Web pages into a format optimized for users with disabilities.

Nancy Tramontin, the university's director of webmaster services, said U.Va. has signed a site license agreement for UsableNet Inc.'s Lift Assistive software.

The school has used the New York-based vendor's software on a more limited basis since 2004 and currently serves 3,000 to 4,000 visitors per month with it.

The $37,000 licensing agreement, signed about two months ago, allows any of U.Va.'s divisions, departments or schools to add Lift Assistive-powered text-only versions of Web pages, Tramontin said. The annual site license can be extended for $15,000 per year starting in 2007, the university said.

The software creates text versions of Web pages that can be read aloud by screen readers for people who are blind, Tramontin said.

"We've had this software on most of the university's main pages, but it's now going to be on every University of Virginia Web page," she said. The school hopes to be using the software across the entire Web site by year's end, she added.

In addition to benefitting people with disabilities, the text-only pages can be viewed on handheld devices and cell phones, Tramontin noted.

According to the school, visitors can customize the text-only Web pages by setting preferences for text size and color.

The Lift Assistive software will be deployed on other Web resources, including the university's Web mail system, online course catalog and class registration system, and the MyUVA portal.

Well-Organized Pages

Angie Matney, a first-year U.Va. law student who is blind, said the software should make it easier to access pages using a program called Jaws for Windows, from Freedom Scientific in St. Petersburg, Fla.

"Jaws essentially converts the information on a Web page into speech or Braille output," Matney said. "The Lift program simplifies what's on the screen before it is sent to Jaws."

Matney said the Lift Assistive software provides a less cluttered version of the law school's Web sites.

"It was very well organized," she said. "A lot of Web sites will offer an alternate Web site in text-only form, but I tend to steer clear of those because I've found that they are not updated frequently.

"What I really like about the [Lift Assistive] software," said Matney, "is that it allows for the dynamic, real-time creation of that alternate page."

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GLOBAL DISPATCHES

An International IT News Digest

Stock Exchange Sued Over Botched Trade

TOKYO

A TOKYO-BASED BROKERAGE has filed a lawsuit against the Tokyo Stock Exchange (TSE) over losses incurred on a botched trade that the firm contends wasn't canceled because of a defect in the exchange's electronic trading system.

Mizuho Securities Co. said that last Dec. 8, it mistakenly ordered the sale of 610,000 shares in a newly listed business called Jupiter Telecommunications Co., known as J:Com, at a price of ¥1 ($0.01 U.S.) per share, instead of the intended sale of one J:Com share for ¥610,000 ($5,212).

Brokerage employees "immediately realized" the error and repeatedly tried to cancel the order, said Mizuho. But, the firm claimed, the cancel order was never processed by the TSE's system, which also didn't recognize that the amount of shares in the initial sell order was more than 40 times larger than the total number that had been issued by J:Com.

Mizuho said it lost ¥40.7 billion ($347.8 million) as a result of the incident after having to pay ¥912,000 ($7,792) per share to buy back some of the phantom stock. The brokerage added that it has been unable to reach an agreement with the TSE on sharing the losses, despite more than 10 meetings.

The J:Com snafu was one of several IT-related problems at the stock exchange in late 2005 and early this year. In a statement about Mizuho's lawsuit, which was filed in Tokyo District Court, the TSE said it will "make clear our assertions on the matter in the appropriate legal forum."

■ MARTYN WILLIAMS, IDG NEWS SERVICE

GLOBAL FACT

$13.7B

Projected spending on 3G wireless network infrastructures in Western Europe in 2008.

SOURCE: GARTNER INC., STAMFORD, CONN.

Chinese Dissident Hits Yahoo on Info Release

TOKYO

A CHINESE DISSIDENT last week claimed that what he described as the capitulation of Western Internet companies to Chinese authorities is a more serious threat to free speech in China than is the government deciding what its citizens can access on the Internet.

The dissident, Wei Jingsheng, singled out Yahoo Inc. for revealing technical information that helped land Chinese journalist Shi Tao in jail last year. Yahoo "will track down Internet users and help to sentence them," Wei said in a speech here at the Foreign Correspondents' Club of Japan.

Shi was arrested in November 2004 after sending an e-mail to a New York-based Web site that advocates democracy in China. With the aid of the information provided by Yahoo to the Chinese government, he was convicted of divulging state secrets in April 2005 and sentenced to 10 years in prison.

In its defense, Yahoo has said that it was simply following local laws in handing over the information and that it must respect the laws in the countries where it operates.

Wei, who spent more than a decade in prison in China for penning an anticommunist essay in 1978, claimed that Yahoo's lobbying in Washington has helped the company avoid being brought to account for its actions in Shi's case.

■ MARTYN WILLIAMS, IDG NEWS SERVICE

Infineon Blames Cuts On BenQ Mobile Crisis

MUNICH

INFINEON TECHNOLOGIES AG late last month said it will lay off 400 workers and take a charge of €80 million ($102 million U.S.) as a result of the loss of BenQ Mobile GmbH as a customer for its communications chips.

Munich-based BenQ Mobile filed for bankruptcy protection in late September after its parent company, Taipei-based BenQ Corp., said it would stop investing in the cell phone operation. BenQ Mobile has since said it will forsake its name-brand phone business after emerging from bankruptcy and instead design handsets for customers such as mobile network operators.

Infineon, which is also based in Munich, said sales of its communications chips had dropped significantly as BenQ Mobile lost cell phone market share in recent quarters. The falling sales prompted Infineon to sign up new customers, including Samsung Electronics Co. and LG Electronics Inc. But the chip maker said it doesn't expect them to make up for the business gap left by the crisis at BenQ Mobile.

■ DAN NYSTEDT, IDG NEWS SERVICE

Singapore Firm Agrees To Settle Piracy Case

SINGAPORE

A SINGAPORE-BASED COMPANY that was caught using pirated software has reached a settlement with the Business Software Alliance, bringing to a close what the BSA claims is a landmark copyright-infringement case.

PDM International Pte., an interior design company, settled with the BSA for an undisclosed sum and agreed to use only licensed software in the future, the software industry group said.

PDM was charged in March with 51 counts of using unlicensed software, including applications from BSA members Microsoft Corp., Adobe Systems Inc. and Autodesk Inc.

In April, a judge fined PDM 30,000 Singapore dollars ($19,200 U.S.), making it the first company to be convicted under Singapore's updated Copyright Act. The law went into effect on Jan. 1.

■ SUMNER LEMON, IDG NEWS SERVICE

IBM Shifts SOA Work To New Sites in Asia

BANGALORE, INDIA

IBM IS setting up development centers in Beijing and in Pune, India, that will take over responsibility from a facility here for building industry-specific business services based on a service-oriented architecture (SOA).

The SOA Solutions Center in Pune will focus on the insurance and health care industries, while its counterpart in Beijing will develop SOA services for banking and government users, said Jeby Cherian, head of IBM's Global Business Solutions Center in Bangalore. Plans call for IBM to employ about 500 people at each of the new facilities, Cherian said at a press conference.

In March, the company opened the Bangalore facility as its global hub for creating and managing reusable software components and SOA services. Cherian said the development staff in Bangalore will now focus on non-SOA components, such as business analytics applications and templates for risk and compliance management.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Compiled by Mike Bucken.

Briefly Noted

IBM and investment firm Lehman Brothers Inc. have set up a $180 million venture fund for investing in Chinese companies that want to adopt new technology and business practices. IBM and New York-based Lehman Brothers said they each contributed $90 million to the China Investment Fund, which will invest in midstage and mature companies in a range of industries and provide them with management and technology skills.

■ SUMNER LEMON, IDG NEWS SERVICE

Capgemini signed an agreement to acquire Kanbay International Inc., a Rosemont, Ill.-based IT services firm, for $1.25 billion. Paris-based Capgemini said it made the move to boost its ability to deliver services from India, where most of Kanbay's 6,900 employees are located. Capgemini expects the combined workforce of the two companies in India to total about 12,000 by the time the deal closes early next year.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Symantec Corp. said last week that it plans to double the research and development staff at its China Development Center in Beijing by next March. The software vendor will add 300 workers at the facility, which develops products mostly for the Chinese market.

■ SUMNER LEMON, IDG NEWS SERVICE

Motorola Inc. last week opened a research and development facility in Hyderabad, India, that will eventually house more than 100 engineers. Schaumburg, Ill.-based Motorola said workers at the facility will create an intelligent user interface for its cell phones and work on WiMax, security and high-availability technologies, plus network management and autonomic systems.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Alibaba.com Corp., an e-commerce company in Hangzhou, China, said it will acquire an undisclosed stake in Koubei.com, which operates Web sites that offer classified ads and discussion forums. Koubei, also based in Hangzhou, claims to have 2 million registered users of its Web sites, which are tailored to specific cities in China.

■ SUMNER LEMON, IDG NEWS SERVICE

Congratulations Honoree Award Recipients!

Storage Networking World proudly announced the results of the "Best Practices in Storage" Awards Program. This program honors IT users "Best Practice" case studies selected from a field of qualified finalists.

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Honoree Award Recipients in each of the following categories were recognized during the Gala Awards ceremony at Storage Networking World at the JW Marriott Grande Lakes Resort, Orlando, Florida on November 2, 2006.

Innovation and Promise

- **Pixar Animation Studios, Emeryville, California**
- **Warner Bros. Entertainment Inc., Burbank, California**

Finalists: Digital Film Tree, Hollywood, California
Level 3 Communications, Broomfield, Colorado
The Virginia Department of Motor Vehicles, Richmond, Virginia

Planning, Designing and Building Strategic Storage Infrastructure

- **Denver Health, Denver, Colorado**
- **Defense Contract Management Agency, Fairfax County, Virginia**

Finalists: Industrial Color, New York, New York
Salisbury University, Salisbury, Maryland
The AVID Group, Palm Harbor, Florida

Securing the Storage Fortress

- **Cbeyond Inc., Atlanta, Georgia**
- **Screen Actors Guild – Producers Pension and Health Plans (SAG-PPHP), Burbank, California**

Finalists: George Washington University, Washington, DC
R.C. Willey Home Furnishings, Salt Lake City, Utah
Sinclair Community College, Dayton, Ohio

Storage Reliability and Data Recovery

- **APM Terminals, Charlotte, North Carolina**
- **Corrections Corporation of America, Nashville, Tennessee**

Finalists: Chaffe McCall, New Orleans, Louisiana
CSX, Jacksonville, Florida
Intuitive Surgical, Sunnyvale, California

Systems Implementation

- **AOL, Reston, Virginia**
- **Pacific Title and Art Studio, West Hollywood, California**

Finalists: Bardel Entertainment, Vancouver, British Columbia
CSX, Jacksonville, Florida
MedicAlert Foundation, Turlock, California

Mark your calendar to submit nominations for the Spring 2007 Awards Program to be announced April 2007.

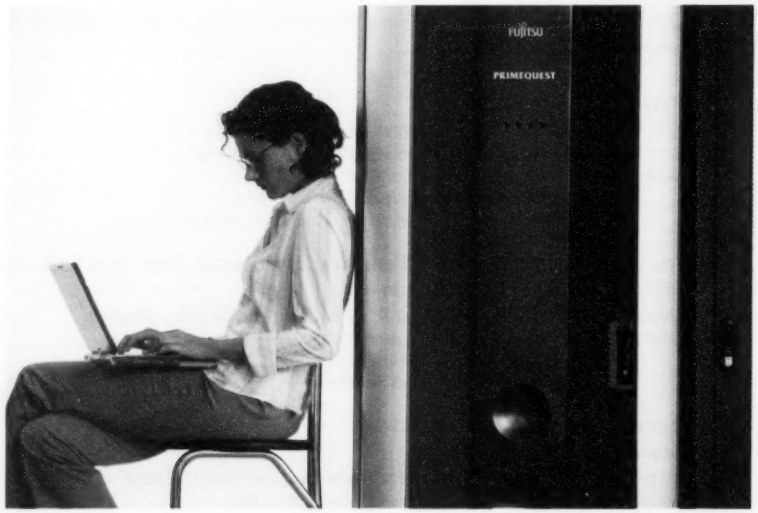
Paving the Way to Enterprise Modernization

Understand the bottom-line benefits by taking action now....

THE IMPERATIVE FOR enterprise modernization is simple: It comes down to common-sense economics. Familiar legacy systems have been the foundation for many businesses for decades, so it's easy to ignore the compelling economics of the non-proprietary alternatives. But, in fact, these alternatives not only offer strategic benefits and immediate tactical pluses—they are also almost invariably less expensive. In short, the ability to seize a compelling ROI is often just a decision cycle away.

Maintaining legacy systems is expensive. First you have the built-in cost of proprietary technology. Add to that the labor overhead of maintaining and updating hand-built code and patchwork systems. But the bigger issue is that spending on legacy systems means not only throwing away money that could be better invested in more flexible and powerful IT solutions, but also—more importantly—tying your business to the fixed and outmoded operational styles of years past.

However, there are options. You don't have to stay where you are. You can break free and move ahead with the help of an innovative modernization services offering from EDS that takes advantage of Intel processor-based, industry-standard servers from Fujitsu and Oracle software solutions [see sidebar].



There is no one best way to modernize. The process begins with an assessment and review of existing applications with an eye toward long-term goals and thinking about what can be migrated and what should be migrated. Your partners in modernization should be able to attune themselves to your business and be open to finding a solution that matches your needs. EDS—with its global experience—is ideally positioned in this regard, with many means of delivering modernization and the skills to help you assess and balance the value of various methods. Indeed, while the migrations that are core to modernization were once viewed as risk-prone, the tools, techniques, and well-honed best practices that EDS provides—as well as the power of Fujitsu hardware and Oracle software, which are the chosen tools for these migrations—now make this a predictable process.

This process, which can often be relatively noninvasive, produces a more agile, flexible infrastructure.

If you have been hesitant about initiating a legacy modernization

Executive Summary

Businesses today are constrained by the inflexibility of older technology and its high maintenance costs. Breaking out of this trap will help businesses free IT budgets for strategic entrepreneurial opportunities, while creating a modern foundation that can sustain growth over the long term. In fact, according to "Data Center Consolidation," a 2006 CIO/Computerworld Nextgen IT survey, over the next three years, 44% of those surveyed plan to eliminate their mainframe environment. It's no longer a question of *if* you will modernize, but of *when*.

The Power of Partnership

Since inefficiencies caused by out-of-date technology can slow down operations, hobble customer service, and hurt competitiveness, it makes sense to adopt more modern and appropriate technology. And the sooner you make the transition, the sooner you can begin to achieve the benefits.

EDS, the leading global technology services company that pioneered information technology outsourcing more than 40 years ago, today delivers a broad portfolio of information technology and business process outsourcing services, including modernization.

Because of the power of Oracle application development tools such as Oracle JDeveloper, Oracle ADF and Oracle BPEL Process Manager, EDS is able to quickly re-factor extracted business logic and deliver re-architected systems accurately and cost-effectively.

Clients in a wide range of the manufacturing, financial services, healthcare, communications, energy, transportation, and consumer and retail industries—as well as in government—look to EDS for help in transitioning from cumbersome legacy systems to more modern (.NET and J2EE), adaptable, and affordable architectures. To best deliver what those organizations need, EDS has also partnered with Fujitsu, a provider of industry-standard servers. Those servers, in turn, are built on Intel processors—processors that have become the backbone of business for thousands of applications in companies across virtually every industry. In fact, Itanium® 2-based servers power nine of the 10 largest companies in the world. Thanks to those technological underpinnings and Fujitsu's deep data center expertise, its servers deliver an unprecedented level of mainframe-like reliability, availability, and serviceability (RAS).

For example, the Fujitsu PRIMEQUEST™ server line combines Fujitsu-designed memory and I/O sub-system with the economics of the Intel® Itanium® 2 processor to produce a mainframe-class, mission-critical open systems server. The scalability designed into PRIMEQUEST provides the agility, efficiency, and continuity to meet a business's needs now and well into the future. And it makes a perfect starting point for EDS modernization services.

Change is a necessity. But don't go it alone. EDS and its partners at Intel, Fujitsu, and Oracle have put together an approach based on standard technology building blocks, best practices, and global experience with different companies. It's a formula for adding value while lowering risk.

program, this may be the perfect time to act. The cost has never been lower, and the risks never fewer.

A Healthier Bottom Line

Of course, changing the status quo is never easy. Companies are besieged by tactical concerns such as demands to lower the cost of a particular application or to support a new business initiative. These day-to-day concerns often threaten a company's ability to act strategically. Fortunately, modernization delivers clear and rapid ROI, making it a compelling choice.

While the exact results are dependent upon the software language, number of lines of code, complexity of applications, and amount of processing being done, payback periods average from 6 to 12 months, making the argument in favor of exploring modernization undeniable. In fact, the experience of EDS clients has demonstrated that simply re-architecting a Cobol application to a more modern SOA software infrastructure based on Oracle Fusion Middleware can often reduce the number of lines of code being managed by 50 to 70 percent. The overall impact of a change of this magnitude to the business is compelling.

Furthermore, enhanced features and greater functionality are delivered by driving new ergonomic interfaces, real-time data access, seamless web capability and mobility access, all while preserving the application's business logic. Real cost savings can be achieved and can range between 35 and 60 percent over a three-year period. These saving are generated through lower maintenance costs for COTS software, reduced application development costs, and significantly lower operating costs. And the reliability, availability and serviceability of the system remain the same.

Organizations that have modernized have found themselves better equipped to handle crises and meet new challenges. Most of all, modernization means they can move faster to seize marketplace opportunities.

The bottom line is that, with modernization, IT organizations can reclaim their ability to function as change agents and as a source of business leadership and competitive advantage. Determining the impact of modernization on your organization is worthwhile because—in addition to delivering benefits to your organization—it can potentially reduce your management challenges. And that is perhaps the most compelling argument for modernization.

FOR MORE INFORMATION, go to www.nextgenitinsights.com.

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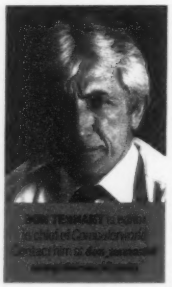
DON TENNANT

A Lot to Learn

LAST WEEK, IBM and Lehman Brothers announced that they had teamed up to create the China Investment Fund, an initiative to invest not in start-ups, but in "mid-stage to mature" Chinese companies, both public and private. With an initial capitalization of $180 million, the fund aims to spread the venture capital frenzy beyond the pre-IPO crowd to more traditional Chinese enterprises.



It was a logical step in a business strategy that seems to have been adopted wholesale by corporate America: Think of China as a place to either make money by investing in potentially successful and lucrative companies or save money by tapping the low-cost labor pool.

Of course, if you're really on the ball, you might manage to do both at the same time. In our "Outsourcing in China" feature in this week's issue (page 37), Maria Trombly and Bill Marcus report from Shanghai that U.S. interests are getting into the China outsourcing business by setting up companies with headquarters in this country to take advantage of U.S. management and marketing expertise, and with operations in China to take advantage of inexpensive developer talent.

Regardless of what work is done where, the attraction of dealing with China always seems to have something to do with somebody's bottom line. It appears to be a generally accepted principle that what China has to contribute to U.S. business can be neatly summed up in an Excel file.

It's an arrogant, shortsighted, wasteful premise. The fact is, there is much to be gained from China that is only indirectly related to rows and columns on a spreadsheet. Through innovation, resourcefulness and sheer will, China has emerged as a hub of technology implementation best practices. And we are foolish not to appreciate the value in learning from them.

The examples are numerous, and we'd find them compelling if we'd only make the effort to look. Consider Guangzhou Baiyun International Airport, which last year was named a laureate in the *Computerworld* Honors Program for the impact it has made on what the program calls the "global information technology revolution."

The Guangzhou authorities didn't hesitate to tap the expertise of a U.S. company, Unisys, to help create one of the world's most technologically advanced airports. And it would behoove us to be just as unhesitant to recognize the operational role the Chinese played in that effort.

Other *Computerworld* Honors laureates in China include China Minsheng Banking, China Ping An Insurance, the Guangdong Postal Bureau, China National Foreign Trade Transportation Group and Tsinghua University. There are others as well, and all of them warrant our open-minded investigation.

Beyond implementation-oriented best practices, there are other technology-related practices in China that merit emulation. At last year's Open Source Business Conference in San Francisco, for example, Irving Wladawsky-Berger, IBM's vice president of technology strategy and innovation, spoke passionately about the need to reform U.S. patent policy. Noting that the U.S. Patent and Trademark Office is too lax in granting patents, he cited China as a country where patent applications are given appropriate scrutiny to enable innovation.

Some might dismiss all of this with the wave of a hand and a reference to controversies such as the Chinese government's censorship of Google. I can't help but note that even when it's not censored, sometimes you don't get the search results you might expect.

When you Google the phrase, "what U.S. business can learn from China," guess how many hits you get. Zero. That's right. Not a single one. For our own sake, let's not fool ourselves into believing that's because there's nothing for us to learn.

Don Tennant

BRUCE A. STEWART

Signs of Excitement

MY OCT. 9 column, "Bring the Excitement Back," talked about IT's need to do just that. This month, I'd like to honor some of the cases where I've seen CIOs leading their organizations in ways that truly are exciting.

Getting More From a Vendor: Most IT shops describe vendors they spend a lot of money with as "strategic," but a vendor is strategic only when a shop invests the time and energy in working with it to evolve its product in ways that improve IT's own world. One CIO in an industry-leading logistics operation has worked very closely with his company's ERP vendor. His IT group is engaged in a co-production: The vendor gets its customer's deep industry knowledge, while the customer gets early delivery of modules that embed and embody that knowledge. This kind of two-way investment not only makes for more interesting work but also pays off in letting the logistics provider be first to market with industry-changing code. With opportunities like these in play, it should be no surprise that this employer doesn't suffer from turnover of staff or managers.

BRUCE A. STEWART is a former CEO and onetime senior vice president and director of executive services at Meta Group Inc. He is now an executive adviser in Vancouver, British Columbia. He can be contacted at bruce@brucestewart.com.

Getting Out There: Relationship management in most IT shops remains stuck somewhere between limited participation in the planning process and order-taking, but for the few who have moved beyond, it's become a true sales challenge. One CIO in a financial services firm charged his relationship management team to learn how to sell change. They've started to figure out the true business benefits and costs of everything IT does. Ask one of the relationship managers there how to sell increased spending on disaster recovery, for example, and he's got the answer, in business terms. These managers have stretched to become

change-support agents, helping the business deal with the productivity hits — and benefits — of new services and applications. They're also masters of talking about how their business colleagues can leverage what's been delivered: free new value, ready for the taking. They're a cross between the best kind of partner in a consulting firm and the kind of person who takes charge of a start-up and turns it into a real company. And they're achieving results. Unlike most IT organizations, this one is at the table — early enough to make a difference — and the demands for new services truly fall into the "challenging" category.

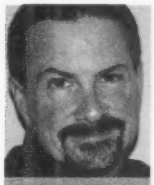
Absorbing the Net Generation: A lot has been written this year about the Net Generation, new employees who've never known a world without the Internet. It's been recommended that companies roll with the punches as these employees bring IM and public Web spaces into the workplace. At one company, a director of infrastructure went further: She looked for ways to integrate these technologies into workflows. The help desk now employs these technologies to interact with users, and they've been introduced to supplement customer care. Plans for the company's customer portal project include the use of social group software. Even conference-call meetings across sites now routinely have group IM as a back channel. Productivity is up, as is fun — and this insurance company is getting a rapid increase in customer satisfaction as one side benefit.

None of these IT organizations has trouble selling ideas or getting budget. Most of us wouldn't be here in the U.S. if our forebears hadn't left their homelands and tried something new. Remember, if you don't make a difference, your own caution will eventually send your job somewhere else.

STEVE DUPLESSIE

Fiorina Bad, Hurd Good, HP Better

HEWLETT-PACKARD IS back with a vengeance. The board-spying fiasco is the only blemish on what has been a stellar inauguration for CEO Mark Hurd — and I don't blame him for that at all, since he inherited a dysfunctional board.



STEVE DUPLESSIE, the founder of Enterprise Strategy Group Inc., is a weekly columnist for *Computerworld.com*, where he answers readers' questions. You can send them and your comments to **sinceyouasked@computerworld.com.**

A year ago, HP was in the dumps. Carly Fiorina had spent more time acquiring corporate jets and hanging out with celebrities than doing anything to turn around an old, stodgy company. I loved watching her on *60 Minutes* a few weeks ago, taking credit for the HP renaissance and trying to steal Hurd's thunder by suggesting it was her plans that are now delivering success. Silly, if you ask me, and all done while wearing a truly heinous top.

Fiorina was a superb self-promoter who kept the company (and herself) in the limelight while products got old, the sales force got lazy and market share plummeted. Hurd looks like he'd rather spend time as a proctology practice dummy than deal with the media. That approach seems to be working, though, because last quarter, HP overtook Dell in the PC market, storage is showing more energy and enthusiasm than ever, the services business is generating new (and very large) opportunities worldwide, and HP's little printer business finally seems to be catching on. There isn't much that isn't heading the right way at HP these days.

Does Hurd get all the credit? No, but he sure has set a new course at HP. Accountability exists now. He has done some very un-HP-like things that have rejuvenated the place, such as pulling the trigger on acquisitions in days versus months or years. And once the acquisitions are complete, Hurd keeps the new people on board to infuse new life and skills into HP and shake up the status quo. It remains to be seen whether giant buys such as Mercury Interactive will pan out, but they look good so far.

In storage, HP historically let smart people at acquired companies run away with their cash and the ideas that had gotten them where they were. Now, it is promoting the entrepreneurs it swallows up. Case in point: Ash Ashutosh, the founder of AppIQ, is now HP's storage chief technology officer. Duncan Campbell, the storage vice president of marketing, is a smart, interesting guy with a sense of humor — once considered a character flaw inside HP.

If nothing else, this little diatribe should prove my own mental flexibility. For over three years, I have been trashing HP for losing the formula that made it the undisputed dominant force in midrange storage. Now, I'm glad to say, it's back, and it looks better than ever. Sun has replaced HP as the king of companies that have huge installed bases that are almost impossible to screw up — but that somehow make really bad decisions and refuse to change a culture that worked 10 years ago but now makes it look like it is vying for the boneyard. Perhaps the Sun folks should pay attention to what HP has been able to pull off by nuking the sacred cows and challenging the previously accepted assumptions.

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www.computerworld.com/columns

READERS' LETTERS

It's a Crime to Use Next Door's Wi-Fi

ALTHOUGH THE article "Open Season on Unsecured Wi-Fi" [*Computerworld.com*, Sept. 4] is an interesting read, I believe Douglas Schweitzer misses the mark on several instances. Most importantly, there is no question that unauthorized access to a computer network is a crime; several cases have already shown this. Unsecured Wi-Fi is a risk, just like leaving your door unlocked or the keys to your safe on your desk. But even if you do those things, it is still a crime for someone to enter the house or safe, and it is a crime to access to a network without authorization, even an unsecured one.

Ty Simone
Chief executive manager, DarkVision Technologies, Edison, N.J.

Know Your SOA

SUE HILDRETH ["Common-Sense SOA Approach," *Computerworld.com*, Sept. 4] forgot an SOA component key to governance: a registry/repository that lets you to know at the very least which services your SOA has.

Javier Cámara
Software architect, Software AG Spain, Tres Cantos, Spain, jcamara@softwareag.es

Intel's Problems Go Beyond a Layoff Fix

CONTRARY TO what Intel President and CEO Paul Otellini claims, layoffs will not make the company more agile and efficient ["Intel Confirms Layoffs as Part of Restructuring Effort," *Computerworld.com*, Sept. 5]. That's because the management responsible for Intel's diminished expectations is still in place.

Twenty-five years ago, IBM handed Intel a monopoly on the microprocessor, but Intel management has not only been unable to expand its business; it is also on the verge of squandering its de facto monopoly.

It's now clear that Intel's success was not so much its own doing as the favorable technical and economic environment in which the company evolved.

The comparative lack of successful Intel spin-offs over the past quarter century is also an indictment of Intel's culture, one of command-and-control and hubris rather than creativity and innovation.

In a way, Intel's floundering is an example of creative destruction that economist Joseph Schumpeter thought characterized capitalism.

Unfortunately, it is workers, shareholders, communities and customers who pay the price, while management continues to enrich itself with extravagant salaries, options and perks.

Tom Shillock
President, M2 Consulting, Portland, Ore., tomsh@easystreet.com

Tips on Talking the Talk to Executives

THE FOLLOWING steps have always helped communicate technical information to business executives ["Selling IT to the CEO: Keep It Simple," News, Sept. 18]:

- As an appendix to all communications, attach a well-crafted glossary of the technical terms used in the presentation.
- At the start of any presentation, display an alphabetically sorted list of the technology terms to be used and ask if any explanations would be helpful.
- When using technology acronyms, use the full name followed by the acronym the first few times.
- Don't get technology-happy – calm it down.

Gopal K. Kapur
President, Center for Project Management, San Ramon, Calif., gkapur@center4pm.com

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

FUTURE WATCH

Superstorage

The goal of the Petascale Data Storage Institute is to make storage more efficient, reliable, secure and manageable in systems with tens or hundreds of petabytes of data on tens of thousands of disk drives. **PAGE 30**

SECURITY MANAGER'S JOURNAL

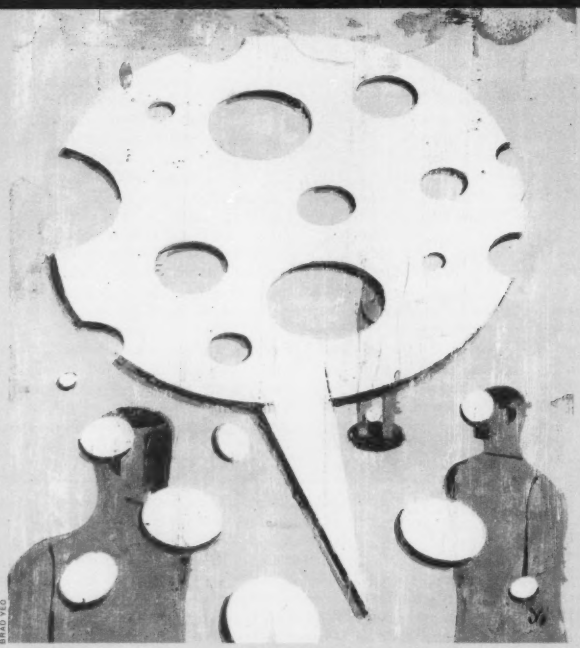
Sometimes a Light Bulb Just Turns On

C.J. Kelly loves it when her staffers share their ideas and get excited by their work. **PAGE 32**

OPINION

Getting a Handle on Handhelds

Michael Bodetti says you need an inventory of wireless devices so you can better manage expenses, which may amount to $1,500 per device annually. **PAGE 34**



BRAD VEO

Lost IN TRANSLATION

By Kym Gilhooly

KIM WETTEN, lead process specialist at PHH Mortgage Corp., knows how difficult managing application requirements can be. Before 2002 — when the Mt. Laurel, N.J.-based company invested in a major overhaul of its application development processes — the requirements management process was manual.

"We used Word documents; there was no automation, no traceability, no tying back to defects," says Wetten. For a large project, where new requirements might touch as many as 20 systems, business analysts would struggle with versioning as they tried to share and update documents comprising hundreds of pages.

"If you remembered to write things you changed at the beginning of the document, then you had a good track record. But you're making mass updates — you don't remember to write everything down. Developers would constantly have the wrong version, so they'd be developing outdated software," Wetten says.

PHH's experience mirrors that of companies in many industries: Managing the requirements that govern the development of applications — particularly those that touch numerous enterprise systems and stakeholders — has long been a trouble spot in the application life cycle.

"Defects in requirements are the source of the majority of defects that are identified during testing, and problems with requirements are among the top causes of project failure," according to a recent report by Forrester Research Inc.

Even conservative estimates make it clear that requirements errors are responsible for a big chunk of rework expenses. The inability of business users to articulate their needs, IT's lack of business savvy, and an overreliance on Word documents and spreadsheets are major contributors to these errors.

Because of the cost of rework, more organizations are buying software that streamlines and automates the requirements definition and management process. Not only do these tools allow for real-time collaboration, but they're also becoming increasingly instrumental in producing better-quality applications, thanks to integration with software configuration management, change management, quality assurance and testing tools.

THE PROBLEMS

- Incomplete, misunderstood or misarticulated requirements
- Missed or unknown requirements
- Poorly managed requirements changes
- Ignorance of the downstream impact of a requirements change

SOURCE: FORRESTER RESEARCH INC.

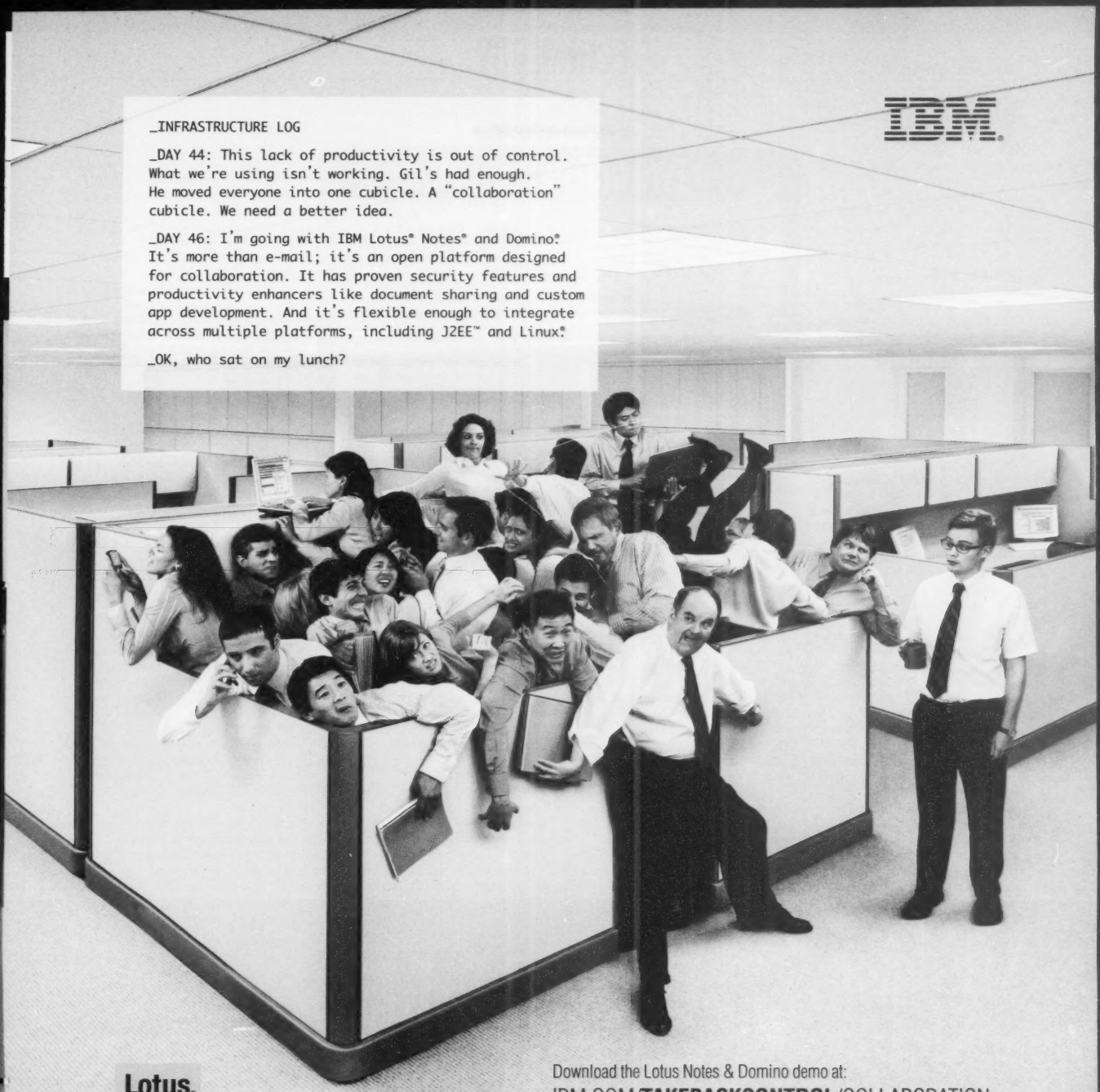
Requirements management offerings are available from the large application development tools vendors, including Borland Software Corp., Compuware Corp., IBM Rational, Serena Software Inc. and Telelogic AB, as well as numerous smaller vendors. These tools typically handle requirements definition and change functions, from eliciting the needs of end users to the analysis, validation and ongoing management of requirements.

In 2002, following a close examination of its requirements management processes, PHH bought Borland's application development tools suite, including its Caliber RM tool. Wetten says that after a "fairly large ramp-up" in getting analysts and developers up to speed on the new tools and revamped processes, PHH has significantly improved visibility into its requirements.

"We wanted to get away from the

Continued on page 28

Poor communication about user requirements can doom a software development project. But there are tools to make the discussion more organized and successful.


IBM
_INFRASTRUCTURE LOG
_DAY 44: This lack of productivity is out of control. What we're using isn't working. Gil's had enough. He moved everyone into one cubicle. A "collaboration" cubicle. We need a better idea.
_DAY 46: I'm going with IBM Lotus® Notes® and Domino®. It's more than e-mail; it's an open platform designed for collaboration. It has proven security features and productivity enhancers like document sharing and custom app development. And it's flexible enough to integrate across multiple platforms, including J2EE™ and Linux®.
_OK, who sat on my lunch?
Lotus.
Download the Lotus Notes & Domino demo at:
IBM.COM/TAKEBACKCONTROL/COLLABORATION

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Continued from page 26

whole document-based approach," says Wetten. "We chose Caliber because it has an object-based approach, allowing us to mix and match requirements for individual entities. By treating individual requirements as individual entities, you only need to get sign-off on the change, not a whole document, when a requirement changes."

The IT department is in the process of building a Web interface so business analysts can use Caliber's traceability capabilities to determine whether a requirements change is worth the cost involved, says Ed Briggs, team lead.

"If we're very late in the development cycle, we'll be able to accurately assess the impact of pulling something out or delaying into a future release," he says.

Bally Technologies Inc. makes video and slot machines for the gaming industry and is expanding into software for casino management. The Las Vegas-based company's need for tight integration between its requirements, programming and testing processes was a key driver in its recent investment in application life-cycle management tools, according to Ron Beck, director of software development.

As part of the ramp-up of a new software development division, Beck purchased Serena's RM, TeamTrack and Composer tools, which he says are closely integrated with other tools he purchased, including Microsoft Corp.'s Visual Studio 2005 and Mercury Interactive Corp.'s test tools.

"It was important that we had an integrated suite of tools that can handle everything in our development process, from visual modeling upfront, to change management, to requirements management, to source-code control, to test plans," says Beck. "If I need a snapshot at any given point, I can go to one place to see configurations, requirements and test plans."

Beck's team is building an enterprise accounting system for casino customers and has thus far modeled the application, generated usage cases, technical assessments and test plans, and entered those into its Serena RM system. Because TeamTrack interfaces with Visual Studio, says Beck, "we can manage the code, manage the revisions [and] do automatic building."

At Madison Capital Management LLC in New York, requirements management has been eased by storing all requirements in a single repository, says Russell Schroeder, vice president of software development. Madison uses requirements management and development tools from Boulder, Colo.-based Rally Software Development Corp. The tools adhere to agile development methodology, so Madison can, for example, make more frequent updates to its MarketPlace application, which handles fund, contact and contract management, says Schroeder.

The process of defining and gathering requirements has been improved as well, he says. "The tools allow you to do use cases, creating stories between actors and systems to see how processes will play out," says Schroeder. "That way, there's no question about how processes should work: If a user does this, this is how the system will react."

Define, Then Design

Like Madison Capital, more companies are taking a hard look at the requirements definition phase of their development cycle, where, if they can improve processes, they stand to reduce rework.

"Requirements management tools ensure you don't miss changes to requirements, but they're only as good as the requirements [that were defined] in the first place," says Forrester analyst Carey Schwaber.

This need for better-defined requirements has not only resulted in the integration of definition tools within application life-cycle management suites, but it has also given rise to a new crop of simulation, prototyping and other visualization tools that enable business analysts and developers to map processes, user interfaces, system integrations and other application components (see story below).

Defining an accurate set of user requirements is important whether you're building applications or buying them, says Jay Slaughter, manager of business analysis and application projects at Atlanta-based SavaSeniorCare LLC, which operates about 180 senior-care facilities throughout the U.S.

Slaughter, who is in charge of ensuring communication between administrative executives in Atlanta and an IT group in Houston, is using Detroit-based Compuware's Optimal Trace for the requirements definition process. The tool is helping define requirements for a new CRM project as the company begins to focus more resources on sales and marketing. Slaughter says he's working with stakeholders to define requirements for the project prior to meeting with CRM application vendors.

"I use Optimal Trace even when we're not developing in-house," he says, "because the process — the initiation, the requirements definition, the business process modeling — should be consistent." ◗

Gilhooly is a freelance writer in Falmouth, Maine. You can reach her at kymg@maine.rr.com.

TWO DISTINCT STEPS

1 Requirements definition: Getting an accurate and complete description of what the business wants the system to do.

Tips for success:

- **Balance business and IT involvement.** Avoid either too little or too much business involvement (e.g., dictating a solution).
- **Recognize that text isn't always the best medium.**
- **Get proper training for business analysts, the linchpins of the requirements definition process.**

2 Requirements management: Managing the user requirements – and any changes – throughout the life cycle of the development project.

How to pick the right tools:

- **Avoid tools that are too complex for the size or type of your project, or you'll have shelfware.**
- **Ensure that end users are comfortable with the tool.**
- **Adopt tools with an eye toward integration with other parts of the software life cycle, especially with testing tools.**

SOURCE: FORRESTER RESEARCH INC., SEPTEMBER 2006

Visual Aids

Text isn't always the best way to communicate what computer systems should look like or do. A new breed of requirements definition tools enable engineers to put the application interface and underlying processes in a visual context, using techniques such as simulation and high-fidelity prototyping.

There are visual definition capabilities in tools from suite vendors such as Compuware, Borland and Serena, but smaller vendors are targeting this field too, says Forrester analyst Carey Schwaber. The small players include iRise Inc., Ravenflow, Axure Software Solutions Inc. and Sofea Inc.

These kinds of tools "let you construct upfront a fairly accurate simulation of what the application's going to look like down the road," Schwaber says. "Instead of describing what you want, you work with a business analyst or usability engineer to construct it. It serves as a visual contract between business and development."

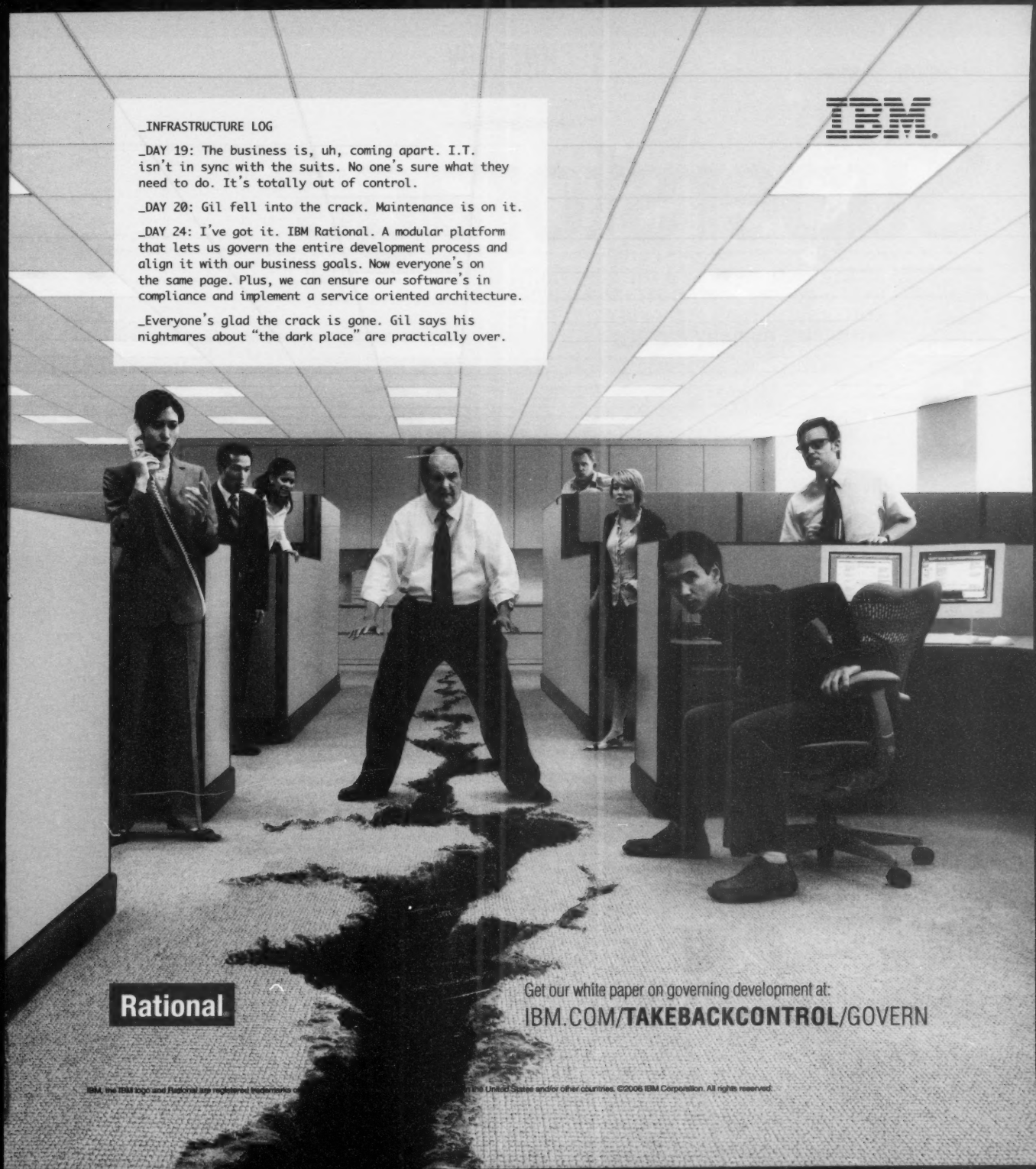
Bally Technologies has had early success using Serena's Composer, a definition modeling and prototyping tool, says Ron Beck, director of software development. He and his team have been using Composer at customer sites to model processes for Bally's latest enterprise accounting product. Composer, Beck says, has significantly decreased the time it takes to map a casino's specific processes into the accounting software.

> It serves as a visual contract between business and development.
>
> CAREY SCHWABER, FORRESTER RESEARCH INC.

"We used to waste so much time on mapping requirements due to lack of communication," which was exacerbated by the many different functional and regulatory requirements that casinos must comply with depending on the states in which they operate, says Beck. "Now we're able to model the interface and interactions between systems and users to see what works."

"One of our biggest challenges is the visual aspect of the requirements process, because the English language is ambiguous," says Kim Wetten, lead process specialist at PHH Mortgage. PHH business analysts currently use Microsoft's Visio to create process maps, she says, but this approach doesn't allow them to see the business logic behind a requirement. She says the firm is considering purchasing Caliber Define IT, a visual modeling tool.

– KYM GILHOOLY


IBM.
_INFRASTRUCTURE LOG
_DAY 19: The business is, uh, coming apart. I.T. isn't in sync with the suits. No one's sure what they need to do. It's totally out of control.
_DAY 20: Gil fell into the crack. Maintenance is on it.
_DAY 24: I've got it. IBM Rational. A modular platform that lets us govern the entire development process and align it with our business goals. Now everyone's on the same page. Plus, we can ensure our software's in compliance and implement a service oriented architecture.
_Everyone's glad the crack is gone. Gil says his nightmares about "the dark place" are practically over.
Rational.
Get our white paper on governing development at:
IBM.COM/TAKEBACKCONTROL/GOVERN
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Superstorage

FUTURE WATCH

AS STORAGE MOVES TO THE FOREFRONT OF SUPERCOMPUTER RESEARCH, ADVANCED TECHNOLOGIES FROM NATIONAL LABS AND UNIVERSITIES ARE EXPECTED TO TRICKLE DOWN TO COMMERCIAL USERS. BY GARY ANTHES

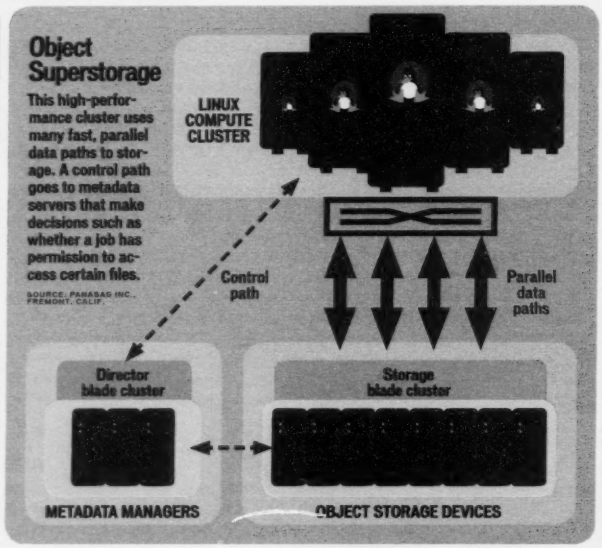
DISCUSSIONS ABOUT supercomputer performance almost always center on processing speed — how many gazillion operations per second can be performed by the giant machines. Makers and users of supercomputers also like to brag about things like the number of processors, the amount of memory and the bandwidth available for moving data about.

Such metrics are important determinants of how much work the machines can do. Less often focused on, but becoming critically important, are questions of storage: How much disk capacity do the computers have? How fast can data be written to and read from storage? How easily and quickly can an application be restarted when a disk fails? How can file systems be scaled up to efficiently handle petabytes of information? How the heck can you find something when your system has 30,000 disks?

Those questions and more will become the focus of the Petascale Data Storage Institute (PDSI), which was recently founded by computer scientists at three universities and five of the U.S. Department of Energy national laboratories with a five-year, $11 million DOE grant. "The overall goal is to make storage more efficient, reliable, secure and easier to manage in systems with tens or hundreds of petabytes of data spread across tens of thousands of disk drives, possibly used by tens of thousands of clients," says Ethan Miller, a computer science professor at the University of California, Santa Cruz.

ETHAN MILLER, professor, University of California, Santa Cruz

That system may not much resemble the one used by your accounting department, but the computer scientists at the institute say — and the vendor sponsors are hoping — that new technologies from petascale storage research will trickle down to commercial users.


Object Superstorage
This high-performance cluster uses many fast, parallel data paths to storage. A control path goes to metadata servers that make decisions such as whether a job has permission to access certain files.
SOURCE: PANASAS INC., FREMONT, CALIF.
LINUX COMPUTE CLUSTER
Control path
Parallel data paths
Director blade cluster
Storage blade cluster
METADATA MANAGERS
OBJECT STORAGE DEVICES

"The use of high-performance computer clusters in many commercial applications, [such as] oil and gas, semiconductors and biotechnology, is growing substantially," says Garth Gibson, a principal investigator for the PDSI and a professor at Carnegie Mellon University.

He adds that companies are increasingly using supercomputers to boost revenues. "High-performance computing is not so much about cost reduction as it is about improving the quality of products," Gibson says.

GARTH GIBSON, professor, Carnegie Mellon University

Disk Dilemmas

Storage systems have the unfortunate quality of not scaling well. Here are some of the problems that PDSI researchers will try to solve:

■ **Disk access times have not kept pace with disk capacity.** In 1990, a computer could read an entire hard drive in under a minute. Now it takes three hours or so to read the largest disks. "It's only going to get worse, and it will take longer and longer to recover from a disk failure," Miller says.

■ **As the number of disks in a system increases, so does the probability that one will fail in any period of time.** Right now, big systems at the national laboratories fail once or twice a day, but with multipetabyte systems, that rate could increase to a failure every few minutes.

■ **When a disk does fail, the ones that must restore the affected data to another disk have to work even harder, increasing the chances that one of them will fail too.**

Applications at the national labs — for example, simulations of the aging of nuclear weapons — can run for months. They generate huge amounts of data, in part because they periodically copy the contents of memory to disk as "checkpoints" in case a disk or processor fails. Researchers will look for faster checkpoint/restarting methods, better fault-tolerance technologies and more efficient file systems.

One promising approach that's now coming into use at the national labs is a technology called object storage, by which clients can access storage devices directly without going through a central file server. Object storage devices have processors attached to them so that lower-level functions, such as space management, can be handled by the devices themselves. And because data objects contain both data and metadata, it's possible to apply fine-grained, highly intelligent controls for security and other purposes. What's more, object-based storage systems tend to be much more scalable than traditional ones.

Researchers will also work on protocols and APIs, especially those related to Linux. They will help develop extensions to Posix, the portable operating system interface for Unix, to enable more effective use of file systems in highly parallel computer clusters. Researchers will also work with The Open Group and the Internet Engineering Task Force to make the Network File System protocols for file access more capable in highly parallel systems.

The PDSI will explore a number of emerging technologies, such as phase-change RAM, Miller says. PRAM, recently announced by Samsung Electronics Co., offers the speed of dynamic RAM with the nonvolatility of flash memory. Miller says it's the perfect place to put metadata because it can be accessed much more quickly than if it were on disk, thereby making object storage systems much faster.

Miller says PRAM might also be used to store indexes used by search engines, greatly accelerating them as well. That increased speed may prove to be of interest to businesses such as oil companies that have huge stores of private data but lack the enormous resources of a company like Google Inc.

Few corporations will ever have systems the size of those at the national labs, with tens of thousands of disks, says Miller. But even desktop systems, which will have more and more disk drives over time, will experience some of the challenges the PDSI will address.

"I can't tell you yet which ones they will be," he says. "But problems at the high end have a nasty habit of trickling down to the low end."

_INFRASTRUCTURE LOG
_DAY 18: Everything is frozen. It's our processes. They're inflexible. We can't respond to change.
_Why did we lock ourselves in like this? Brrrr.
_DAY 19: A way out. IBM WebSphere middleware for Business Process Management. It lets us streamline business tasks. We can test our processes before we roll them out and monitor performance once they're deployed, and reuse is easy because it's based on a service oriented architecture.
_Everything's unfrozen now. Wow, it's good to feel my toes again.
IBM
WebSphere
Take the BPM with SOA Assessment at:
IBM.COM/TAKEBACKCONTROL/PROCESS

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Sometimes a Light Bulb Just Turns On

Our manager loves it when her staffers share their ideas and get excited. Is this really a government job? By C.J. Kelly

SECURITY MANAGER'S JOURNAL

ONE OF the fun things about managing people is that moment when you can actually see them grow. You see the light bulb turn on, and you know it's the right light that's burning inside them.

I have explained before that my management philosophy includes the idea of setting technical people free to do their jobs. It's an approach that lets them use creative problem-solving techniques in their own styles.

It's rewarding to see this approach work, but sometimes it makes you feel as if you're taking the slow boat, since you can't interject how you think something should be done. Patience is required, especially when you think you know the right way to accomplish something. But if you want the best possible solution to a problem, you have to let go of the reins and let the smart people figure it out. It's how you end up with the best ideas, which may be better than your own, for tackling a situation.

When I came to this state agency about a year and a half ago, I was disappointed to realize that my new staff didn't want to think outside the box. I have heard that this is a cultural phenomenon that's common in government and military jobs, but I don't know if it's true across the board, since this is my first job in the public sector.

In past columns, I have talked about this culture and what I have done to try to change it, and I have received some hate mail in return stating that I hate government employees. Nothing could be further from the truth. After all, I am one. What I hate is seeing creativity being stomped on, attitudes that say "That ain't my job," and a general lack of accountability.

When I got here, I saw people pass the buck and lay blame, possibly for fear of reprisal. I didn't see people stepping up to the plate, taking risks and laying out their ideas for making government a better place to be. That's wrong. It stunts progress if people are afraid to step outside of their comfort zones, suggest ideas because they will be shunned, or make a mistake because they know they will pay for it.

We all want progress and innovation, and to get them, we must have synergy. *Synergy*, from Greek *synergos*, means "working together." One Merriam-Webster definition is "a mutually advantageous conjunction or compatibility of distinct business participants or elements (as resources or efforts)." When you have a group of people who are working together as a true team, with no one worried about making a mistake or having a dumb idea, you end up with lots of creative options to choose from. It happened here recently.

> When I came here, I was disappointed to realize that my new staff didn't want to think outside the box.

A Net Difference

We've been locking down our network, servers and access controls systematically. Several interrelated projects are under way, each led by a senior technical person. Teamwork is essential. If the right hand doesn't know what the left hand is doing, network access can be cut off for an entire workgroup or branch office.

Meanwhile, as a manager and the technical security engineer for our agency, I had my own set of projects to take care of. I was shifting among doing personnel reviews, preparing supporting documentation for the budget, answering questions from accounting, working with vendors, scheduling training, creating reports — all that administrivia that I don't really care for — as well as configuring and installing the last of several intrusion-detection sensors. Next up for me was installation and configuration of the firewalls.

Every agency in the state has to ensure the security of its own network, and we do so with little or no guidance from above. We're part of the overall state network, but in a way, that's like a huge Internet service provider for all the agencies. The state network folks protect the state WAN's endpoints with routers and firewalls. The WAN is hard on the outside but very mushy on the inside where our network resides.

Mushy isn't good if, like my agency, you must follow the rules in the Health Insurance Portability and Accountability Act. We have to consider the state WAN to be an untrusted network, and so we must take responsibility for things like firewalls and encryption. And all the things that we are responsible for within our own network we are still responsible for when they get out on the state network. We have to ensure that data traversing the state network remains confidential.

With that in mind, I was putting together a plan that would include site-to-site virtual private networks (providing encryption) and firewalls. As part of that plan, I explained to my staff that we would be changing the IP addressing scheme and Network Address Translation at the firewalls to increase security. And that's when it happened — the light-bulb moment.

One of my senior people jumped in with some ideas of her own. She came up with the perfect IP addressing scheme, one that improved on my own ideas, and she suggested using the switches at Layer 3, creating virtual LANs to further secure areas of our network and allow us to do things like implement port filtering. Her ideas were solid, correct — and welcome.

That staffer would never have jumped in with all those great ideas 18 months ago. She had to learn that she's truly encouraged to do that sort of thing and that her ideas are really valued. When I saw the look on her face as she started to spell out her thoughts, I knew that what I've been doing is having an effect. We are working together, and we are a team.

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "C.J. Kelly," whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com, or join the discussions in our security blogs: **computerworld.com/blogs/security**

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**

SECURITY LOG

Spammers Start Island-Hopping

McAfee Inc. researchers have been tracking a trend whereby spammers use the top-level domain names of small islands as Web site links in spam campaigns to circumvent spam filters that traditionally catch more well-known domains. The practice was first discovered when McAfee researchers noticed a significant increase in the use of .st domains, the TLD for São Tomé and Príncipe.

Some of the other small islands McAfee has identified as favored by spammers:

TLD	Island
.tk	Tokelau
.cc	Cocos Islands
.tv	Tuvalu
.as	American Samoa
.im	Isle of Man
.to	Tonga

Spam Victory Sets German Precedent

Microsoft Corp. has won a case against a spammer in Germany. The country lacks an antispam law, so the case turned on trademark violation, a criminal offense in Germany. An unnamed man was found guilty of sending unsolicited e-mails with spoofed Hotmail return addresses without Microsoft's permission.

Australia Sees First Spam Conviction

In the first conviction under Australia's stringent Spam Act of 2003, Clarity1 Pty. was fined $3.46 million (U.S.) and its director, Wayne Mansfield, $768,000 for sending 280 million unsolicited commercial e-mails over the course of two years. About 25%, or 73 million, of the messages were delivered successfully.

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BRIEFS

Liquid Computing Unveils Server

■ Liquid Computing Corp. in Ottawa last week released its first server, the LiquidIQ. The vendor's technology, called the Interconnect Driven Server, integrates high-speed networking technologies. It also includes hardware-level virtualization and open-source Xen virtualization technology. Each chassis is 26U (45.5 in.) high and can support up to 80 AMD dual-core Opteron processors.

LogMeIn Announces Hosted VPN Service

■ LogMeIn Inc. in Woburn, Mass., last week announced a virtual private network service designed to let network administrators quickly and inexpensively provide remote user connectivity. LogMeIn Hamachi takes less than a minute for an administrator to set up, requires no firewall or router, and delivers a VPN connection over a direct and secure peer-to-peer link as an Internet service, the vendor claims. The VPN will be available this month as a free download or as a premium hosted service starting at $39 per seat per year.

Wildfire IM Links to Public IM Networks

■ Enterprise collaboration software vendor Jive Software has released Wildfire 3.1, a new version of its open-source enterprise instant messaging server application that lets users communicate with people using public IM products, including Yahoo Messenger, AOL Instant Messenger, MSN and ICQ. Wildfire 3.1 uses application plug-ins to connect with public IM networks while supporting security, archiving, auditing and advanced management benefits typically available with an enterprise-class IM product, according to the Portland, Ore.-based vendor. A limited-feature version of the software is free; the full-featured enterprise version starts at $495 per server plus $12 per user, or $19,950 for an unlimited number of users.

MICHAEL BODETTI

Getting a Handle On Handhelds

IF YOU'RE RESPONSIBLE for managing wireless devices, you know that it's like trying to hit a moving target. Wireless deployments are expanding at a rapid pace as wireless spending is becoming a much larger portion of corporate telecom expenses. By some estimates, the cost will increase fivefold within three years.

It used to be that only a few key individuals were authorized to carry company-paid devices such as cell phones and pagers. Now there's an epidemic deployment of a larger group of wireless devices, including BlackBerries, handhelds, WAN cards and others. And the notion of who qualifies as "key personnel" has ballooned.

MICHAEL BODETTI is an expert at The Advisory Council, an IT advisory service, and CEO of TnT Partners LLC in Sandy Hook, Conn. He can be reached at **michaelb@tacadvisory.com**.

From a corporate perspective, this makes sense: Studies show that wireless deployments have produced double-digit improvements in productivity and profitability. So it's worth giving someone a device and paying the total cost of ownership — which could add up to $1,500 annually (or much more, in some cases) — to get the productivity benefits.

But introducing new pieces of equipment and associated expenses also means they need to be managed. Managing stationary equipment, such as desktop PCs, is standard practice. Trying to manage an inventory of portable devices that is not only increasing but also changing from day to day is a different story. Now factor in all the special features of the wireless world — such as number portability, warranty exchanges, loaner devices, spare pools and user swap-outs — plus the need to accommodate personal preferences and decide what to do when employees are terminated. Making sure that end users are satisfied is important, but the challenge really lies in keeping track of who has what.

When most companies realize they need to get control of their wireless inventory, they usually take the path of least resistance and rely on the carriers to tell them what they have.

This "fox in the henhouse" approach may provide some relief, but do you really want to rely on the carrier, whose goal is to sell as many devices as possible? Personal experience shows that carrier invoicing is typically off by 7% to 20%. Is this who you want managing your inventory?

The best-in-class companies take a strong stand on managing wireless services. They look to maintain a knowledge base of what they have (the inventory), the usage of their devices (such as minutes consumed), and the best technology and business practices. They know that solid inventory management is key to having visibility into expenses. This becomes critical to having accurate data to validate monthly bills from the carriers.

If you have responsibility for your company's wireless devices and services, consider a comprehensive wireless management approach to avoid losing control. There are two options: Either develop an in-house capability where you assemble trained staff along with software tools for inventory and optimization, or outsource the function to a telecommunications expense management service provider that handles wireless services.

A comprehensive wireless management approach provides expense management, visibility, standardization and improved service to users.

The right tools open the doors to auditing, inventory-to-billing reconciliation, service optimization, carrier and contract leveraging, budget-forecasting metrics, and centralized protocols and policies.

Even having good practices doesn't ensure 100% accurate inventory. The nature of the wireless business is that there are constant "moves, adds and changes." You'll need other checks and balances to keep the inventory clean. For example, with proper oversight, you can identify lines that may have no activity. Suppose a user ported his personal number onto the corporate device he was given. If the original line on the corporate device wasn't canceled, you'd get bills for both. The only way this would be noticed is if a monthly usage analysis were conducted, at which point you would know to cancel it.

Other checks that can be done include an analysis of the inventory against your active employee list. Any unidentified devices that still can't be nailed down can always be contacted, either by phone call or text message, to see if they should remain on your inventory.

For some companies, wireless devices and carrier services are a multimillion-dollar annual expense. Isn't it prudent to have visibility into and control over such a large recurring expense? Ultimately, the savings from proper management of your wireless devices and services will far outweigh the cost of doing it right. ▸

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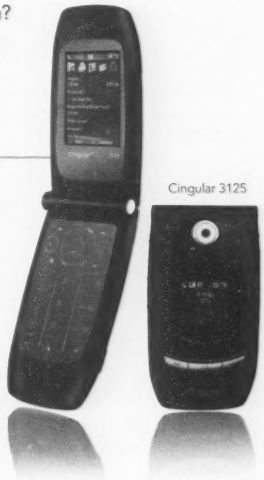

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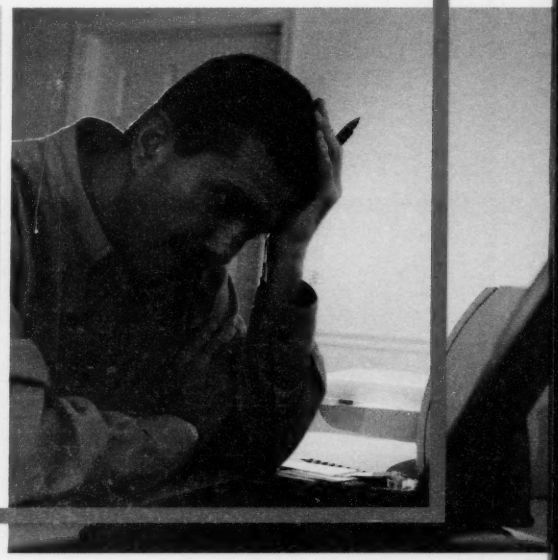

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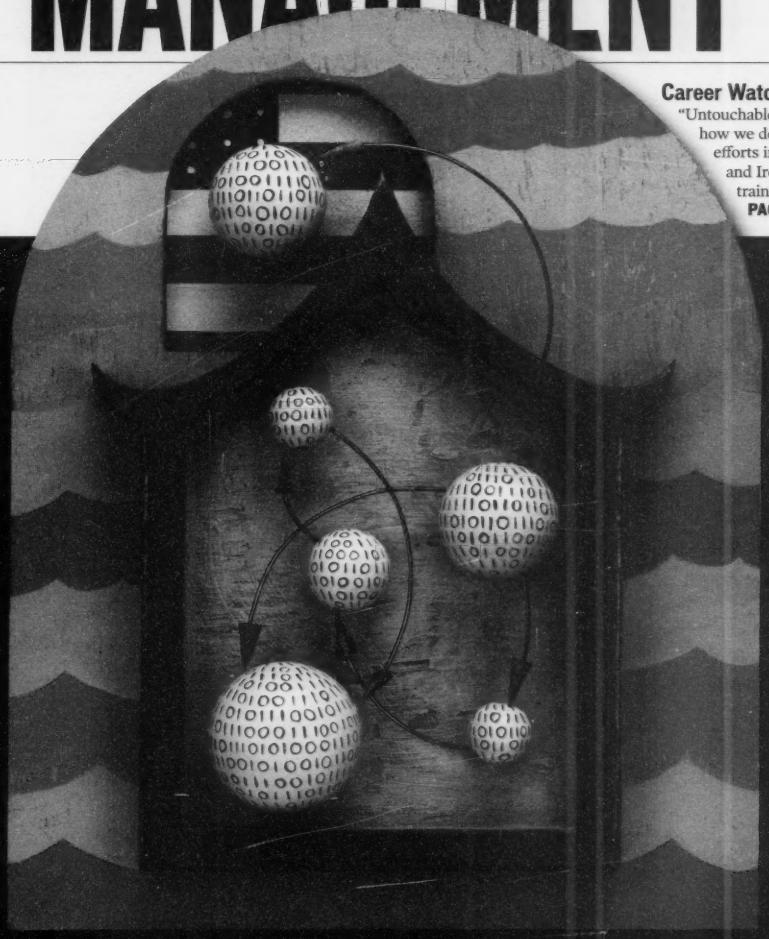


Career Watch
"Untouchables" in the office and how we deal with them; IBM's efforts in service education; and Ireland's success in IT training on a national level. **PAGE 40**

OPINION
One Sure Way to Fail
Ever feel that the rules apply to everybody but you? You may be developing a sense of personal exceptionalism, which can lead to failure, warns Paul Glen. **PAGE 44**

Outsourcing China

Most providers target the burgeoning domestic market, but a few offer a hybrid approach that appeals to the West.

BY MARIA TROMBLY AND BILL MARCUS

ABOUT TWO years ago, Kevin Miller needed a little help supporting legacy applications and developing new software for large automotive manufacturers. He decided to conduct a Cobol pilot project with Information Technology United Corp., a Beijing-based outsourcer with U.S. offices in Redwood City, Calif.

"We'd seen their marketing and qualifications; we just wanted to do a proof of concept to make sure that everything worked," says Miller, who is systems consulting manager for the automotive solutions group at Dallas-based Affiliated Computer Services Inc. (ACS).

Miller's team had worked previously with vendors in India and Russia. China was new territory, but the Chinese company had the right skills at the right price. It offered Web development skills, .Net experience and CMMI Level 3 certification, indicating mature processes. "And their cost structure was very competitive," he says.

Since that first pilot project, the relationship has expanded. Today, 15 IT United people are working on ACS projects, and ACS is in the process of bringing on 15 more, Miller says.

But IT United is the exception, not the norm. Unlike India's large and thriving outsourcing industry, China's is still immature and fragmented, with few companies attaining high-level international certifications. Moreover, most of the IT outsourcing that happens in China today serves that country's domestic market, such as the financial services sector.

Still, U.S. companies are finding a few providers, like IT United, Freeborders Inc. and Achievo Corp., that combine U.S.-based management, marketing and support teams with China-based developers.

Looking Inward

In today's Chinese software outsourcing business, foreign clients account for just 10% of total revenue, compared with around 70% for India,

MARIA RENDON

says Giuseppe De Filippo, an associate principal at global consultancy McKinsey & Co.'s IT practice in Shanghai.

Even the work that is done for multinational companies is often focused on Asia. For example, outsourcers may translate Web sites and applications into Chinese or other Asian languages. They may also rewrite business applications for local currencies or to allow input in Asian double-byte characters.

But the huge Asian market is attracting outside investment. Bangalore, India-based Infosys Technologies Ltd., a major global IT outsourcing vendor, has committed to spending $65 million over the next five years to build the first of many consultant campuses in Shanghai, says James Lin, CEO of Shanghai operations at Infosys.

After that, it will begin to look at second-tier cities such as Dalian, Chonquing, Wuhan, Nanjing and Chengdu, where the Chinese government offers tax exemptions for businesses.

Infosys isn't alone. Major Western companies such as Accenture Ltd., IBM and Hewlett-Packard Co. and Indian vendors Wipro Ltd. and Tata Consultancy Services Ltd. are also ramping up in China. There are no clear market leaders yet, so the companies are establishing an early presence. They hope that will position them to respond to growing domestic demand, serve global supply chain networks and attract nearby Japanese and Korean clients.

HP, for example, has more than 1,500 employees in China now, says William Poon, who heads HP's managed services for China and Hong Kong. Analysys International, a Beijing-based market research firm, estimates that HP's share of the Chinese market is 4.4%, second only to IBM's 5.2%.

HP has put its faith largely in the domestic market, Poon says, supplementing that with clients from Japan and Korea.

Looking Outward

Japanese clients accounted for about 60% of the nondomestic outsourcing work in China in the first quarter of this year, while customers in Hong Kong accounted for 10%, and clients in the U.S. and Europe combined accounted for just over 22%, according to Analysys International.

Chinese companies that seek external clients face a variety of challenges. A major one is communication, so having a U.S. office and Western managers can be a big selling point. That was part of IT United's appeal, says Miller.

"IT United has a good mixture of Western managers and Chinese managers, and English is how they do their business within their office," he says.

Still, of the IT United team currently working for Miller's group, only the project manager has good conversational English skills. "The other team members can write, but their speaking abilities are limited," Miller says.

Cultural differences represent another challenge — one that can complicate communication. "The Chinese workers are going to agree with you most of the time, rather than tell you, 'No, that's not a good idea,' " Miller says.

The solution is training, he says. "Part of our process is getting them to understand that when we, as a group, review work and make corrections to it, that's not a criticism; it's to better the project," Miller says. "It took them a while to get a bit more open about it and start putting comments on each other's work."

Another problem is retention of skilled Chinese employees. Turnover rates for IT professionals average 15% to 20% in China, compared with 10% elsewhere, says Lin. "It will take a while to stabilize people," he says. "There are a lot of jobs in Shanghai. People move fast."

"[ACHIEVO HAS] DONE A GOOD JOB OF BRINGING THE AMERICAN STYLE INTO A CHINESE COMPANY. . . . THE COMMUNICATION HAS BEEN SUCCESSFUL, EVEN BETWEEN THE ENGLISH-SPEAKING EMPLOYEES AND THE OFFSHORE TEAM."

LIMIN HU, CTO, ELLIE MAE INC.

But these challenges didn't stop Ellie Mae Inc. from testing the waters. The Dublin, Calif.-based company provides software and services for the mortgage industry. Many of its managers are originally from India and China, so those two countries were prime candidates when the 240-employee company needed to outsource some development and quality assurance work.

Chief Technology Officer Limin Hu polled employees about which country they preferred to target, and China won. "Working with the offshore team, you get to go to China, so everybody was thrilled about the opportunity," Hu says.

Having Chinese-speaking employees on staff was an advantage for Hu, but not everyone at Ellie Mae speaks Chinese, so picking a vendor with the right language skills was important.

Ellie Mae chose to work with Achievo, and communication played a role in that decision. Achievo has a policy of doing all its business in English, and many of its employees in China used to work overseas, Hu says.

"They've done a good job of bringing the American style into a Chinese company," Hu says. "So the communication has been successful, even between the English-speaking employees and the offshore team."

It doesn't hurt that Achievo's global headquarters is San Ramon, Calif., not far from Ellie Mae's offices, Hu says.

Small Scale

Achievo is one of the largest U.S.-focused outsourcing vendors in China, with about 1,000 employees worldwide and quite a few Fortune 1,000 customers, including DaimlerChrysler, Fujitsu, Mercedes-Benz, Siemens, Hitachi, NEC, Pioneer, NTT Data and Toshiba.

It's still tiny compared with the Indian and U.S. outsourcing giants, but small-scale outsourcing contracts are typical in China. Large-scale outsourcing operations serving U.S. customers have yet to take root in this nascent market. IDC analyst Eugene Wee says that the Chinese outsourcing market is growing at about 30% annually but was still worth only $586 million at the end of 2005. "China's IT outsourcing market is still embryonic," he says.

Another small outsourcing provider operating in China is San Francisco-based Freeborders, which has more than 500 employees in the southern city of Shenzhen.

Wichita, Kan.-based Invista BV (formerly DuPont Textiles), one of the world's largest fiber manufacturers, began using Freeborders in 2001 to create an online fabric library. "They worked closely with us around the clock and were able to deliver not just on time but ahead of schedule," says Norman Beveridge, Invista's global e-business apparel manager. "Over the next couple of years, our relationship with Freeborders strengthened."

Freeborders CEO John Cestar knows that communication is the key to the future for outward-facing Chinese outsourcing.

To improve the English skills of his employees, Cestar says, he has four full-time English teachers on staff. "Our business is delivering services to the larger world, and the key is language expertise," he explains. "In our industry, a number of companies have blown up over this issue; the importance of integrating culturally can't be overstated."

The language training and the skills they acquire working for Western companies keep employees happy, Cestar says. Annual turnover is just 3%, and last year the company received 20,000 résumés from job applicants. ◗

Trombly and Marcus are freelance business and technology writers based in Shanghai. Contact them at maria@trombly.com and BillinChina2004@yahoo.com.

Creative Recruiting

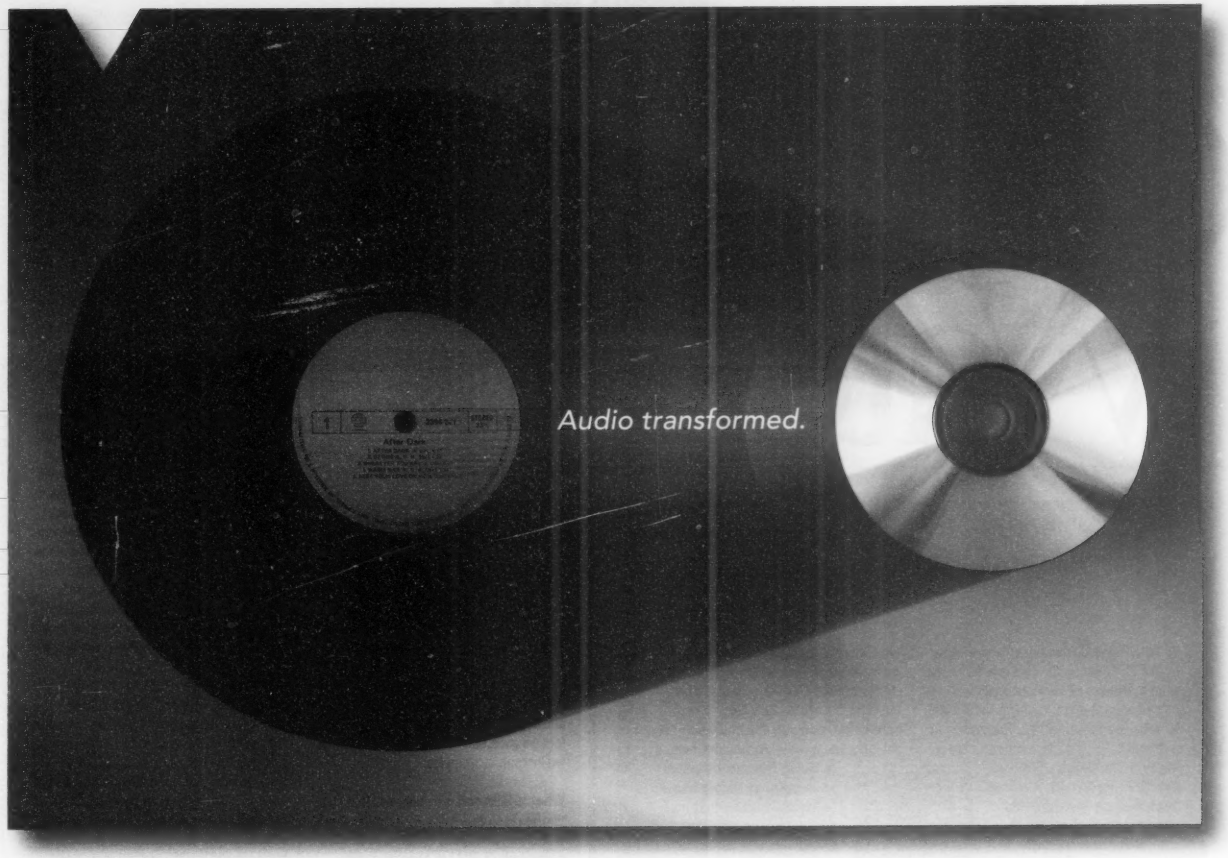
Four years ago, CEO John Cestar took a novel approach to increasing the skill levels at Freeborders, a small outsourcing provider that operates in China. He took a road trip around the U.S., looking for Chinese engineers working in U.S. companies who were interested in returning to China or would soon be compelled to do so because their work visas were about to expire. He recruited a pool of 20 people who spoke both Chinese and English and had U.S.-style management skills.

Today, Freeborders, which was founded in 1999, has more than 500 employees, most of them at a development center in Shenzhen in southern China. The company, which recently received CMMI Level 5 certification, specializes in .Net development and counts Citigroup, Credit Suisse First Boston, J. Crew, Morgan Stanley and Target among its customers.

Cestar says Freeborders has been refining its delivery model and training employees since it was founded, and now it's getting ready to expand.

"Now, we're in a fast growth mode," he says. "We're growing at 70% to 100% a year. We'll double the team by early next year."

– MARIA TROMBLY AND BILL MARCUS



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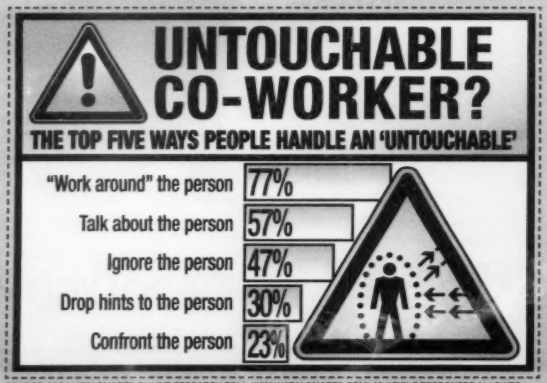
Career Watch

And We Aren't Talking About Eliot Ness, Either

IF YOU THINK Steve Carell's character on the NBC show *The Office* is no more than a figment of some comedy writer's imagination, many of us would like to get a job in *your* office. According to a recent online poll by corporate training firm VitalSmarts, 93% of the 963 respondents say they work with an "untouchable" like Carell's Michael Scott – someone who manages to remain employed despite behavioral traits like dishonesty, abrasiveness, pettiness and vulgarity, and who generally has poor job performance.

93% of survey respondents say they work with an "untouchable."

Most people choose not to confront untouchables (see chart), but VitalSmarts' Joseph Grenny, who is a co-author of *Crucial Confrontations* (McGraw-Hill, 2004), has some tips for doing so effectively: Start by communicating respect; use concrete facts, avoiding judgmental terms; motivate by outlining the natural consequences of an untouchable's behavior in a way that matters to him; and invite the untouchable to share his thoughts and even to show you where you are wrong. You should take the matter to your boss only if you're not successful in this confrontation, and then you should use the same techniques in talking to him.


UNTOUCHABLE CO-WORKER?
THE TOP FIVE WAYS PEOPLE HANDLE AN 'UNTOUCHABLE'
"Work around" the person 77%
Talk about the person 57%
Ignore the person 47%
Drop hints to the person 30%
Confront the person 23%

SOURCE: 2006 VITALSMARTS ONLINE RESEARCH POLL (WWW.VITALSMARTS.COM). MULTIPLE RESPONSES ALLOWED.

Paul Maglio

TITLE: Senior manager, service systems research

COMPANY: IBM

Q&A

IBM has been at the vanguard of efforts to develop a new academic field, Service science, management and engineering (SSME) is a new research area for IBM. The company is encouraging students and potential hires to take interest in the field. Contributing editor Jamie Eckle spoke with Paul Maglio about IBM's initiative, which the company says is designed to give college graduates "new skills to address business and technical issues in a service business environment."

What is SSME? SSME is an idea for a new approach to research in service, an idea for a new academic discipline that integrates a variety of existing fields for education and research in service, and a specific call to action to generate awareness around the need for taking a systematic approach to developing innovation in service.

What is IBM doing to support this academic discipline? Are there signs that it is being accepted by the academic community? IBM has been promoting SSME through presentations at universities and conferences around the world – most recently at an SSME summit in early October in Palisades, N.Y. – through hosting and participating in SSME workshops around the world, and through interacting with specific schools and faculty who are interested. We have also worked with universities, including North Carolina State University and the University of California, Berkeley, on curricula and course materials. So is it being accepted? Courses are being offered at about 30 universities, including NCSU, Berkeley and Ecole Polytechnique Fédérale de Lausanne in Switzerland. And I think the excitement shown at the Palisades meeting is clear.

What does IBM hope to accomplish through SSME? One big thing is to build a base of appropriately skilled workers. Our business is focused more and more on service – more than 50% of IBM's revenue is from services – but college graduates at both the undergraduate and graduate levels do not have the breadth of experience needed to hit the ground running in our service business. SSME aims to develop knowledge and skills that are both broad across a range of areas – social science, engineering, business – and deep in a specific area, such as IT or marketing. At our recent Palisades meetings, Nick Donofrio said that IBM would hire 50,000 service scientists in the next 10 years – if we could.

Does SSME hold the key to a long-discussed need for IT's alignment with the business? Service businesses pose a unique set of challenges, not only from a management and technology perspective, but also from an innovation perspective. Being innovative in service requires that the people and the organizations align with the business and that the technology support both. The novelty, insight and innovation can come from any of these angles, but the whole system – people, technology, business – has to move together. That is what SSME is all about: making this kind of system thinking second nature.

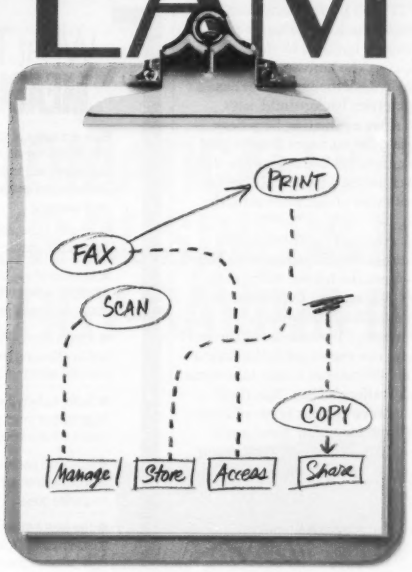
Average number of years 55-to-64-year-old workers have been with their current employers. That's more than three times the average tenure of 25-to-34-year-old workers.

IT ON THE OULD SOD

THE EUROPEAN UNION is taking a look at Ireland's Fastrack to IT initiative as it considers replicating the program in its member states. FIT was set up by 18 of the largest technology companies working in Ireland, including Dell Inc., Microsoft Corp., AOL LLC and Intel Corp. Working with local communities, FÁS (Ireland's national training and employment authority) and vocational education committees, FIT has trained about 5,000 long-term unemployed adults since its founding in 1999. Of those, about 3,000 have gotten jobs in the IT sector, and 600 have gone on to further education. According to Ireland's SiliconRepublic.com, the success of the program has drawn the attention of officials in the European Commission's Education and Culture Department.

– PAGE COMPILED BY JAMIE ECKLE.

TEAM PLAYER



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Plotting PRODUCTIVITY?

How to gauge IT staffers' performance

The jury's still out on the value of quantitative metrics versus more subjective approaches.

By Thomas Hoffman

WHEN Joel Jacobs helps evaluate the performance of each of the 325 IT staffers at The Mitre Corp., some of the factors in his decision-making are subjective.

But he has increasingly tried to quantify the productivity of IT workers at the McLean, Va.-based not-for-profit organization, which manages three federally funded research and development centers. Jacobs, Mitre's deputy CIO, uses performance measurements related to operational services that the IT organization provides, such as whether it's delivering on predefined service-level agreements.

Then there are productivity metrics related to projects that IT workers are involved in, particularly to measure their ability to adhere to deadlines set for project stages, says Jacobs. These are compared against historical project statistics.

If this sounds a bit Orwellian, that's because IT leaders such as Jacobs are under pressure from senior management to cost-justify millions of dollars in IT investments. Part of how they do that is to quantify the value generated by their IT staffers — on both a group level and an individual level — and share that information with top brass.

In some cases, CIOs also use the information in annual reviews for individual IT workers, but most managers say that such data is just one component in a process that tends to rely more upon qualitative measures.

IT staffers at Mitre "either like being in this environment or they don't," says Jacobs. "If they don't, that may cause a problem, but we're not going to back off" of quantitative measures.

Apparently, many workers do like it. This year, Mitre placed eighth in *Computerworld*'s Best Places to Work in IT ranking, notes Jacobs. "We're still regarded as a very good place to work, and I don't think it's hurting morale for us to be more focused" on our productivity, he adds.

The Quantitative Challenge

Although IT executives are responsible for tracking the performance of their IT staffs, many acknowledge that it's a tough thing to quantify.

"We've looked at that kind of thing in the past, but I haven't been real happy with it," says Suzanne Gordon, vice president of IT and CIO at SAS Institute Inc. in Cary, N.C. "There are a lot more qualitative aspects to our jobs."

For others, the challenge is to obtain the right data. "I have a very difficult time finding peer-level benchmarks to measure against," says Tim Ramsey, associate vice president of IT at the University of Miami in Coral Gables, Fla.

The university's IT organization has refined the types of IT staff performance metrics that it tracks, such as the number of trouble tickets handled by its help desk.

Last spring, the University of Miami hired a help desk manager who has a strong metrics background, says Ramsey. After evaluating help desk procedures, the manager determined that the university had more than 250 codes to describe a trouble ticket, but only 70 of those codes were actually being used.

Purging most of the other codes made it easier for the university's help desk to assess the nature of the calls it was receiving and the performance of staffers, according to Ramsey.

For example, IT managers at the university can use the simplified information to determine that it may take some help desk staffers longer than their peers to resolve certain types of trouble tickets or that some "have a propensity to dispatch a tech, while their peers handle the calls themselves," he explains.

Qualitative Reviews

IT managers at Verizon Wireless track a variety of performance metrics that are measured against alignment with business objectives. These include the number of projects completed on time, systems and systems enhancement automation and use compared with targets, first-call problem resolution at the help desk, and reductions in the amount of time needed to resolve system problems, says Tom Madsen, vice president of corporate systems at the Basking Ridge, N.J.-based wireless services provider.

Verizon Wireless also makes extensive use of testing automation tools to reduce cycle times. But the tools provide another key benefit: They enable IT managers to track the quality of the code generated by developers "so we can see if there are opportunities for training and improvement," says Madsen.

Like other organizations that track the performance of their IT staffs, American Century Investments LLC has modified its mix of measurements as its IT organization has matured.

For instance, until about three years ago, the Kansas City, Mo.-based investment services company had a central program management office to gather project statistics. After determining that people in the PMO could be put to better use on projects, the company shifted to a more informal approach to overseeing its IT projects at a team level, says Mike Jackson, vice president of applications.

In order to increase staff productivity, Jackson and other IT managers at American Century Investments evaluate a half-dozen performance and productivity metrics. They use these metrics to determine how much time each of the company's 310 IT staffers is spending on tasks such as application maintenance and checking e-mail, Jackson says.

The metrics are derived from financial data and status reports completed by staffers, as well as through problem-tracking and time-tracking software tools, says Jackson. And because IT workers are involved in their goal-setting processes "from beginning to end," they don't view the measures as totalitarian, he adds.

"It's not a Big Brother type of thing," says Carla Sievers, an IT consultant at American Century. "It's more an evaluation of how people do their jobs." ▸

> It's not a Big Brother type of thing. It's more an evaluation of how people do their jobs.
>
> **Carla Sievers,** IT CONSULTANT, AMERICAN CENTURY INVESTMENTS LLC

What They MEASURE

Here are some of the metrics that IT and human resources executives use to track the performance and productivity of IT workers:

- Results from customer satisfaction surveys
- Number of trouble tickets handled by the help desk/ percentage resolved on first call
- A team member's contribution to delivering projects on time and within scope/budget
- Ability to help the IT organization meet predetermined service levels
- Individual performance as it aligns with achieving corporate goals
- The time it takes to perform specific tasks, including application maintenance and administrative duties

– THOMAS HOFFMAN

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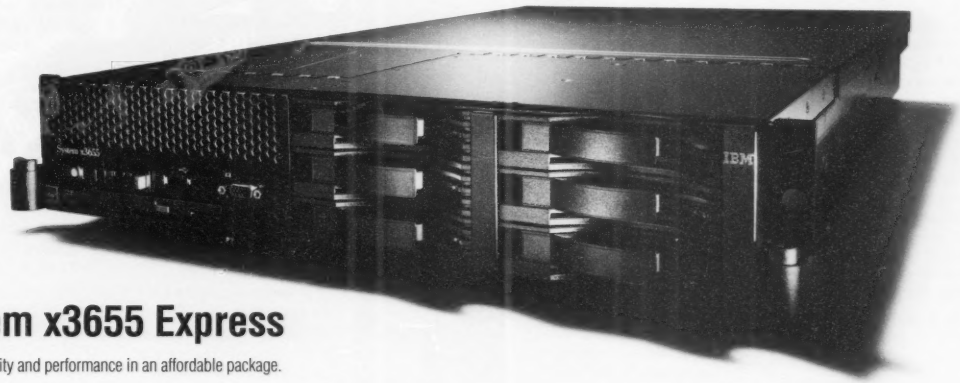

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EXEC TRACK

National Archives Names Morphy CIO

The U.S. National Archives and Records Administration announced the appointment of MARTHA MORPHY as assistant archivist for information services, the agency's CIO position. During most of her seven years at the agency, Morphy has been the director of IT policy and administration.

Sorgen Tapped for The COO Post at EEI

HOWARD P. SORGEN has been named president and chief operating officer of New York-based Enterprise Engineering Inc., where he has served on the advisory board since 2003. Sorgen was formerly senior vice president and chief technology officer at the U.S. private client group of Merrill Lynch & Co. Before that, he was executive vice president at Manufacturers Hanover Corp., where he oversaw global operations and IT.

Romito Picked as CIO at Insure.com

DANIEL A. ROMITO has been named vice president and CIO at Darien, Ill.-based Insure.com Inc. Previously, Romito spent 27 years at The Allstate Corp., most recently as senior executive director of its marketing project management office.

Manufacturing Firm Makes Famurewa CIO

YOMI FAMUREWA has been named CIO at Modine Manufacturing Co., a maker of thermal components in Racine, Wis. Most recently, Famurewa was CIO at Keego Technologies.

Parisi Appointed CTO

PAUL D. PARISI has been named CTO at Declude Inc., a Newburyport, Mass.-based provider of e-mail security. Parisi was founder of MicroData Group Inc. and MicroData Software Inc. Most recently, he was vice president of technology and services at Aegis Associates Inc., a provider of IT products and services.

PAUL GLEN

One Sure Way to Fail

WITH FAIR REGULARITY, someone will ask me, "What is the single most important thing for a leader to do to be successful?" In other words, "What's the secret to good management?" Of course, there's no good answer. There are many paths to management success, and, sadly, none of them is particularly well trodden.

But for every path to success, there seem to be at least 10 highways to failure, and traffic is always jammed on those. There's no shortage of bad management and leadership out there. "Dilbert" is funny for good reason: Most of our bosses are, shall we say, suboptimal.

But I have begun to notice a single pattern that I'd call one of the most common paths to failure: Managers with a sense of personal exceptionalism seem to have a particularly tough time, both in business and in life.

PAUL GLEN is the director of the Developing Technical Leaders Program (*www.developingtechnicalleaders.com*) and author of the award-winning book *Leading Geeks: How to Manage and Lead People Who Deliver Technology* (Jossey-Bass, 2002). Contact him at **info@paulglen.com**.

Personal exceptionalism is a feeling that one is not like other people. For some reason, a person believes that he is special and better than everyone else — that he is apart and above. The exceptional person has more than a grand view of himself — he has a grandiose one.

This isn't the same as self-confidence or healthy self-esteem. Confident people have a sense of their own competencies (and deficiencies), but they don't believe that they have transcended the boundaries of ordinary humanity. They still exist on the same plane as the rest of us, even if they harbor a belief in their own abilities. Those with healthy self-esteem have generally positive feelings about themselves and their value, but this doesn't lead them to believe that they must be judged by a different set of standards than everyone else.

Personal exceptionalism is also not the same as group exceptionalism. Believing that one's team is truly special and apart is quite different. (It brings its own problems, but that's a different story.)

I suspect that some people arrive in management with this problem already well established. In fact, they may seek leadership roles because of their sense of exceptionality: "I deserve this role and, in fact, no one else is as qualified as I am." But they may also acquire this delusion after assuming the job. If enough people tell you how wonderful you are, how special you are, at some point there's a temptation to believe it. It's easy to forget that all the flattery and favors that come with leadership are usually aimed at the role, not its inhabitant.

So, what's the big deal? How does a bit of excessive pride lead to misery?

People who feel that they are exceptional think rules are meant for "regular" people. So they tend to take liberties that the rest of us would never consider. Sometimes it's about relatively small things. They think their time is more precious than the rest of ours, so they deliberately show up at meetings 10 minutes late to avoid having to wait for anyone else. They park their Hummer in the compact spot because it's closer to the office, and they blame building management for putting in too few regular spaces. They always eat the doughnuts but never bring them.

Transgressions can grow over time. Embezzlement, insider trading and sexual harassment are not uncommon for people with these personality types. But they can justify anything to themselves on the basis of their own exceptionalism. They see themselves as special people and feel that they can't be judged by our rules.

But well short of the criminal, managers with this sense of self fail spectacularly. That's because demonstrating contempt for one's staff doesn't inspire confidence, and even minor violations of the cultural rules of behavior undermine credibility. When these people violate the rules that they lay down for others, they are quickly branded as hypocrites and lose credibility on all issues.

Leaders with this misconception also tend to be rather unhappy people, no matter what they portray outwardly. They judge themselves by their own grandiose standards and rarely measure up. The perpetual sense of shame for not actually being as exceptional as they feel can be a crushing burden.

So, if you detect any feelings of exceptionalism creeping into your personality, nip them in the bud. Guarding against personal exceptionalism may not be enough to guarantee management success, but it's a great start if you want to head a productive group and lead a happy life. ▸

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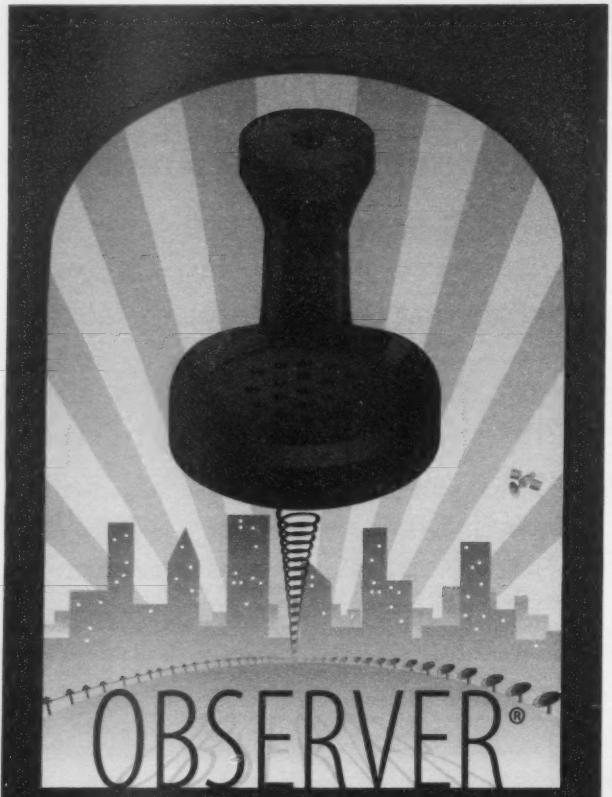

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ACCENTURE LTD. 38
ACHIEVO CORP. 37
ADOBE SYSTEMS INC. 20
ADVANCED MICRO DEVICES INC. 10, 34
AEGIS ASSOCIATES INC. 44
AFFILIATED COMPUTER SERVICES INC. 37
ALIBABA.COM CORP. 20
AMERICA VOTES 16
AMERICAN CENTURY INVESTMENTS LLC 42
ANALYSYS INTERNATIONAL 38
AOL LLC 34, 40
APPRIQ INC. 25
APPLE COMPUTER INC. 8, 12
ASPEED SOFTWARE CORP. 12
AT&T INC. 6, 12
AUTODESK INC. 20
AVAMAR TECHNOLOGIES INC. 12
AXURE SOFTWARE SOLUTIONS INC. 28
BALLY TECHNOLOGIES INC. 28
BANK OF AMERICA CORP. 8
BE HERE CORP. 12
BELLSOUTH CORP. 6
BENQ CORP. 20
BENQ MOBILE GMBH 20
BORLAND SOFTWARE CORP. 26
BUSINESS OBJECTS SA 16
BUSINESS SOFTWARE ALLIANCE 20
CA INC. 6
CADRE INFORMATION SECURITY 17
CANADA REVENUE AGENCY 8
CAPE CANAVERAL AIR FORCE STATION 6
CAPGEMINI 20
CARNEGIE MELLON UNIVERSITY 30
CHINA INVESTMENT FUND 24
CHINA MINSHENG BANKING CORP. 24
CHINA NATIONAL FOREIGN TRADE TRANSPORTATION GROUP 24
CHINA PING AN INSURANCE CO. 24
CITIGROUP INC. 38
CLARITY1 PTY. 32
COMMON CAUSE FLORIDA 16
COMMON. 10
COMPUTER SCIENCES RAYTHEON 8
COMPUWARE CORP. 26, 28
CREDIT SUISSE FIRST BOSTON LLC 38
DAIMLERCHRYSLER AG 38
DECLUDE INC. 44
DELL INC. 25, 40
DEMOCRATIC NATIONAL COMMITTEE 1
DEMOCRATIC PARTY 16
DIGITAL TECHNOLOGY INTERNATIONAL INC. 18
DIRECTIONS ON MICROSOFT 49
ECOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE 40
ELLIE MAE INC. 38
EMC CORP. 8, 12
ENCOMPASS 49
ENTERPRISE ENGINEERING INC. 44
ENTERPRISE MANAGEMENT ASSOCIATES 6
ENTERPRISE STRATEGY GROUP INC. 25
EUROPEAN COMMISSION EDUCATION AND CULTURE DEPARTMENT 40
FAS. 40
FEDERAL COMMUNICATIONS COMMISSION 6
FIRSTLOGIC INC. 16
FIT LTD. 40
FLORIDA DEPARTMENT OF HIGHWAY SAFETY AND MOTOR VEHICLES 16
FORRESTER RESEARCH INC. 26, 28
FORTINET INC. 17
FREEBORDERS INC. 37, 38
FREEDOM SCIENTIFIC 19
FUJITSU LTD. 12, 38
GARTNER INC. 14, 20, 49
GETRONICS NV 14
GLASSHOUSE TECHNOLOGIES INC. 8
GOOGLE INC. 24, 30
GUANGDONG POSTAL BUREAU 24
GUANGZHOU BAIYUN INTERNATIONAL AIRPORT 24
HEWLETT-PACKARD CO. 1, 8, 25, 38
HITACHI DATA SYSTEMS CORP. 8
HITACHI LTD. 38
HP USER GROUP 49
HP-INTEREX EMEA 49
IBM 8, 10, 12, 20, 24, 38, 40
IBM RATIONAL 26
IDC 38
INFINEON TECHNOLOGIES AG 20
INFORMATION TECHNOLOGY CORP. 37
INFOSYS TECHNOLOGIES LTD. 38
INGRES CORP. 10
INSURE.COM INC. 44
INTEL CORP. 10, 12, 40
INTERARBOR SOLUTIONS LLC 18
INTERNET ENGINEERING TASK FORCE 30
INTERSYSTEMS CORP. 18
INVISTA BV 38
IPC-ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES 12
IRISE INC. 28
J. CREW GROUP INC. 38
JIVE SOFTWARE 34
JUPITER TELECOMMUNICATIONS CO. 20
KANBAY INTERNATIONAL INC. 20
KAWARTHA PINE RIDGE SCHOOL 8
KEEGO TECHNOLOGIES 44
KOUBEI.COM 20
LE PETITE ACADEMY INC. 6
LEAGUE OF WOMEN VOTERS OF FLORIDA 16
LEHMAN BROTHERS HOLDINGS INC. 34
LEHMAN BROTHERS INC. 20
LG ELECTRONICS INC. 20
LINUXQUESTIONS.ORG 6
LIQUID COMPUTING CORP. 34
LOGMEIN INC. 34
MADISON CAPITAL MANAGEMENT LLC. 28
MANUFACTURERS HANOVER CORP. 44
MBS TECHNOLOGIES INC. 10
MCAFEE INC. 10, 32
MCKINSEY & CO. 38
MERCEDES-BENZ USA LLC 38
MERCURY INTERACTIVE CORP. 25, 28
MERRILL LYNCH & CO. 44
META GROUP INC. 24
MICHIGAN REPUBLICAN PARTY 16
MICRODATA GROUP INC. 44
MICROS SYSTEMS INC. 49
MICROSOFT CORP. 6, 8, 10, 12, 14, 20, 28, 32, 40, 49
MIDWESTERN STATE UNIVERSITY 17
MODINE MANUFACTURING CO. 44
MORGAN STANLEY 38
MOTOROLA INC. 20
MOZILLA CORP. 6
MSI SYSTEMS INTEGRATORS INC. 10
MYSQL AB 16
NEC CORP. 38
NETEZZA CORP. 16
NETWORK APPLIANCE INC. 8
NEW MEDIA COMMUNICATIONS INC. 16
NEW YORK UNIVERSITY SCHOOL OF LAW 16
NORTH CAROLINA STATE UNIVERSITY 40
NOVELL INC. 6
NTT DATA CORP. 38
ONTARIO MINISTRY OF EDUCATION 6
ORACLE CORP. 6, 8, 16
PANASAS INC. 30
PARSEC GROUP 49
PATRICK AIR FORCE BASE 6
PDM INTERNATIONAL PTE 20
PETASCALE DATA STORAGE INSTITUTE 30
PHH MORTGAGE CORP. 26
PIONEER CORP. 38
QUADRAMED CORP. 18
RALLY SOFTWARE DEVELOPMENT CORP. 28
RAVENFLOW 28
RED HAT INC. 6
REPUBLICAN NATIONAL COMMITTEE 1
RPATH 10
SAMSUNG ELECTRONICS CO. 20, 30
SAS INSTITUTE INC. 42
SAVASENIORCARE LLC 28
SECUNIA APS 10
SERENA SOFTWARE INC. 26
SHELL CANADA LTD. 10
SIEMENS AG 17, 38
SIEMENS COMMUNICATIONS INC. 17
SILICONREPUBLIC.COM 40
SLM CORP. 8
SOFEA INC. 28
SOUTHEASTERN FREIGHT LINES INC. 49
SPSS INC. 16
STELLENT INC. 6
STILLSECURE 14
STORAGE NETWORKING INDUSTRY ASSOCIATION 8
SUN MICROSYSTEMS INC. 12, 25
SUNGARD SA 16
SYBASE INC. 18
SYMANTEC CORP. 9, 20
TARGET CORP. 38
TATA CONSULTANCY SERVICES LTD. 38
TELELOGIC AB 28
THE ADVISORY COUNCIL 34
THE ALLSTATE CORP. 44
THE MITRE CORP. 42
THE OPEN GROUP 30
THE POWERTECH GROUP INC. 10
TNT PARTNERS LLC. 34
TOKYO STOCK EXCHANGE INC. 20
TOSHIBA CORP. 12, 38
TSINGHUA UNIVERSITY 24
U.S. AIR FORCE 8
U.S. BUREAU OF LABOR STATISTICS 40
U.S. DEPARTMENT OF ENERGY 30
U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION 44
U.S. PATENT AND TRADEMARK OFFICE 24
U.S. SECURITIES AND EXCHANGE COMMISSION 10
UNISYS CORP. 24
UNIVERSITY OF CALIFORNIA, BERKELEY 40
UNIVERSITY OF CALIFORNIA, LOS ANGELES 12
UNIVERSITY OF CALIFORNIA, SANTA CRUZ 30
UNIVERSITY OF MIAMI 42
UNIVERSITY OF VIRGINIA 19
USABLENET INC. 19
VERIZON WIRELESS 42
VITALSMARTS 40
VMWARE INC. 6
WIND RIVER SYSTEMS INC. 49
WIPRO LTD. 38
XENSOURCE INC. 6
YAHOO INC. 20, 34

ADVERTISERS' INDEX

AT&T ... 9
CDW ... 13
Cingular ... 35
dtSearch ... 45
EMC Insignia ... 36
Fujitsu Computer Systems Corporation ... 51
Hewlett-Packard ... 15
IBM Cross Server ... 2-3, 43
IBM Software ... 27, 29, 31
Insight ... 7
Intel ... 22-23
IT Executive Summit Wireless Security ... 46
MessageLabs ... 33
Microsoft Security ... 11
Network Instruments ... 46
Ontario Ministry of Economics ... 17
Oracle ... 52
Pillar Data Systems ... 5
Polycom ... 39
SAP ... 18-19
Storage Networking World Best Practices in Storage Honorees ... 21
SunGard Availability Services ... 20/21*
Xerox Office Group ... 41
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Continued from page 1

HP Support

when he called for support. But that hasn't been the case on any of the four or five support calls Dachtera has made since the summer.

"Now you get someone who has trouble with the language, has trouble with the culture and doesn't really know the product lines," he said.

Similar comments from other HP customers prompted the co-chairmen of the OpenVMS special interest group within the Encompass user group to urge members to forward specific details about offshore support problems to them last month. Chicago-based Encompass has its roots in the user group for the former Digital Equipment Corp., the original developer of OpenVMS.

Emphasis on Training

HP declined to make an executive available for an interview on the support issues last week. Dan Socci, vice president of marketing for the technology services unit within the company's services group, said in response to e-mail questions that training of offshore workers for Level 1 support of OpenVMS began last spring. "After months of training and evaluation, customer engagement began within the past 60 days," Socci wrote.

HP is relying on support workers in North America to assist the offshore staffers with Level 1 interactions and handle escalations of support issues, Socci added. "The bottom line is that we're always trying to provide the highest level of service to our customers," he wrote, saying that "rigorous training and quality control processes are enforced" at HP's offshore sites. That includes the recording and monitoring of calls, weekly reviews and the presence of a team focused on support quality, according to Socci.

Dave Robinson, vice president of IT at Southeastern Freight Lines Inc. in Lexington, S.C., said he has had no problems with OpenVMS support. "In the few times that we've had to put in a trouble call, it's been resolved almost immediately," Robinson said.

He added that Southeastern Freight pays for the highest level of support from HP and that he thinks his company's support calls have continued to be handled domestically. "We're not seeing degradation of support," Robinson said.

But many OpenVMS users have never felt completely comfortable with HP's commitment to the future of the operating system, despite the vendor's insistence that it's continuing to invest in, improve and market the software.

SUPPORT TALK

> **Now you get someone who has trouble with the language, has trouble with the culture and doesn't really know the product lines.**
>
> **DAVID DACHTERA,** VMS SYSTEMS ADMINISTRATOR

> **The bottom line is that we're always trying to provide the highest level of service to our customers.**
>
> **DAN SOCCI,** VICE PRESIDENT OF MARKETING FOR HP'S TECHNOLOGY SERVICES UNIT, VIA E-MAIL

Wayne Sauer, president of Parsec Group, a Denver-based HP business partner that provides support and training on HP systems, said technical people aren't ever going to like the offshoring of support. "But in the case of VMS, I think it's just like lighting a fuse on a powder keg," he added.

HP isn't trying to kill off OpenVMS, according to Sauer. But he said that bringing the Level 1 support back to North America would be "a good idea" and that HP needs to do a better job of letting users know what's going on with OpenVMS. "I think if they just communicated a little bit more with their customer base, they would be a whole lot better off," Sauer said.

General support issues came up at an HP technical conference in London last month, said Ian Severn, general manager of the independent HP User Group in Bracknell, England. Severn said his assessment, based on the discussions at the conference, "is that there are some serious concerns from the majority of users."

Partly as a result of those discussions, HP-Interex EMEA, a Brussels-based federation of the U.K. user group and 11 other national ones in Europe, is conducting an online survey to query users about HP's support across all of its product lines. HP-Interex EMEA has continued to operate following last year's collapse of its North American counterpart. ▸

Microsoft Opens Up Embedded OS

Offers full access to kernel code, expands virtual memory space

BY MATT HAMBLEN

Microsoft Corp. last week released an upgrade of the embedded version of Windows, making 100% of the source code in the software's kernel available to developers and packaging the latest release of its Visual Studio development tools with the technology.

Windows Embedded CE is a software tool kit that can be used to build real-time operating systems for thin-client systems, point-of-sale terminals and other devices. Opening the full kernel via Microsoft's Shared Source Initiative should make it easier for device makers to debug product designs without sharing their plans with the software vendor, said Mukund Ghangurde, group product manager for Windows Embedded CE.

The combination of Visual Studio 2005 Professional Edition with Version 6.0 of the embedded software will give users simplified access to Microsoft's suite of application and database development tools, Ghangurde said.

In addition, Microsoft is increasing the number of simultaneous processes that Windows Embedded CE can run to 32,000 — up 1,000-fold from 32 in Version 5.0 — and raising the amount of virtual memory available per process from 32MB to 2GB. With those increases, Ghangurde said, Version 6.0 can support "much more powerful and scalable sets of applications, and devices can be more intelligent."

Built-in Costs

Pricing details on Version 6.0 of Windows Embedded CE

- A free evaluation kit for Windows Embedded CE 6.0 is available from Microsoft's Web site.
- The operating system tool kit and a single license to use Visual Studio and its components cost $995.
- Runtime licenses for products that incorporate the software will start at $3 and decline based on volume.
- The pricing includes 10 years of technical support, plus legal protection for a device maker's intellectual property.

Kyle Kurdle, vice president of hardware development at Micros Systems Inc. in Columbia, Md., said his company has been beta-testing Windows Embedded CE 6.0 since June and plans to ship two point-of-sale devices running an operating system based on components of the new software early next year.

"We're very excited about it," Kurdle said. "There's a whole new memory architecture in it, which opens up new options for us as far as the size of databases and capabilities of our devices, and yet it maintains the same small footprint."

Micros' customers include restaurants with huge inventories of wine. Enabling them to set up and access larger databases of the wine they have in stock will be easier now, Kurdle said, adding that some database searches simply didn't work with earlier versions of Windows Embedded CE.

Rob Helm, an analyst at Directions on Microsoft in Kirkland, Wash., said Microsoft has completely rewritten Windows Embedded CE, enabling users to build operating systems that can more efficiently run applications written by different developers.

Despite that and the other enhancements, Helm predicted that there will be "a slower uptake" of Version 6.0 by developers than there was with earlier releases, partly because its backward compatibility is "not perfect."

Gartner Inc. analyst Daya Nadamuni said Windows Embedded CE has the reputation of not being very developer-friendly. The new version, on the other hand, gives developers more flexibility because the available memory is no longer constrained, she said.

Nadamuni said more than 60 companies sell embeddable operating systems to application and device developers, but she called Microsoft and Wind River Systems Inc. "the big daddies" in that market. ▸

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FRANK HAYES ■ FRANKLY SPEAKING

Botnet Threat

LAST MONDAY, the story hit the news: Foreign hackers attacked a water treatment plant in Pennsylvania in early October and took control of a server there. A day later, we learned the reality wasn't quite so dramatic: A water plant employee's laptop picked up a virus, and the infection spread to a server, which was commandeered by a botnet, probably for use in mass-mailing spam.

What a relief, huh? It wasn't a hacker attack on critical infrastructure — just another routine case of a computer hijacked for a botnet.

Now think: Exactly *why* is that so much better?

Sure, it's good to know that no cyberterrorists were targeting that water treatment plant in Harrisburg. That's the sort of scenario we've feared for the past five years: the bad guys poisoning our water, shutting off our electricity, shutting down our pipelines or sabotaging chemical or nuclear plants by way of the Internet. We've spent half a decade watching out for signs of that happening. It hasn't. That's good.

But meanwhile, we've also seen the rise of botnets — networks of infected computers that can be used for things like denial-of-service attacks but are typically just cranking out spam. No surprise there; after all, for these botnet makers, spam is where the money is.

We haven't worried much about those botnets. Yes, they're a pain. Yes, the quantity of spam they pump out is increasingly a problem for businesses. But we work hard to keep our systems clean of infections and leave it at that.

We don't get worked up about lax security practices in IT shops, among business and home users, or at ISPs and software providers that enable the growth of botnets. That's their problem, not ours — right?

And maybe, in the back of our heads, we actually think we can trust the botnet operators, sort of. They're crooks, but they're not crazies. They may be in Eastern Europe or China or Russia, but they're like any other business, really. They're only in it for the money. We can live with that.

So we've let botnets spread. And now they reach into every nook and cranny of the publicly accessible Internet. They're not looking for anything special, just more places to grab a little processor time and bandwidth. As a result, they'll slip through any unlocked door, any unguarded portal.

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com**.

And though they're parasites, they're intelligently designed parasites. They don't kill their hosts, the way old-fashioned computer viruses once did — erasing hard disks and generally wreaking havoc. Instead, they work quietly in the background, stealing cycles and packets and continuing to infect our infrastructure.

At this point, some botnets qualify as full-blown infrastructures themselves. But we don't worry much about that. We know that for them, it's just about churning out spam and making money.

Yeah, we're stupid that way.

Think: What happens if botnet operators start cataloging the machines in their botnets? What if they identify where those big servers are and what they do in their day jobs?

What if they decide to sell access to those machines to the highest bidder? What if that bidder launches an attack without warning on thousands of servers at once?

Maybe you say it can't happen, that those money-grubbing botnet operators wouldn't kill their golden goose. But what if there's no highest bidder — just one crazy among the capitalists, one cyberterrorist who already has access to a big botnet and is more committed to his cause than to his wallet?

The botnet infrastructure is there. We've let it grow, believing it's just a nuisance. It's time to end that complacency, time to demand results from government regulators, businesses and software makers.

It shouldn't be good news that critical infrastructure was infiltrated by *just* a botnet. It should be a wake-up call. We shouldn't be relieved. We should be furious.

And we should be furiously working to root out botnets and *all* of the security holes that make them possible.

Exceptional IT

At this department meeting, IT boss announces that from now on, staffers are not to respond to any user request unless it's made through the new IT work-tracking system. But what if a frantic manager calls? pilot fish asks. "No exceptions," says boss. Even if it means a manufacturing line is shut down? "No exceptions!" Just then, boss's cell phone rings. He glances at it and answers, and fish knows it's a top manager. "What can I do for you? Your printer won't print? I'll send a tech right over!" Boss puts away phone and continues without missing a beat, "Of course, there will always be one or two exceptions."

SHARK TANK

Talk to Me

University pilot fish keeps hearing a voice from her PC, and she suspects one of the techs is playing a joke on her. Then, while doing some cleanup in a lab, she hears the same voice coming out of a lab computer. "After some checking, it dawned on me: It was our blocking software," says fish. "It was set to sound and log off after 10 minutes of Internet inactivity. A low voice would shout 'Log off!' Others had been obediently logging off, thinking a tech was tapping in and needed the computer to be logged off."

Who Needs 'Em?

Server's hard drive dies overnight, but pilot fish figures it's no big deal – he'll just replace the drive and restore from backups. "Then I learned that particular server wasn't part of our daily, weekly or monthly backup," fish says. "In fact, it had never been backed up! And what data was on that hard drive? The disk images used for disaster recovery for our HR department."

Managing The User

Panicked receptionist calls IT manager pilot fish, saying her monitor is doing weird things, though she's not touching the computer. "I get to her station and pull out her under-desk keyboard drawer," says fish, "and there's her romance novel, open face-down, mashing the keyboard. She turns an enchanting tomato red and mumbles, 'Uh, sorry, I had to hide the book when the boss came by. Please don't tell on me!' Me? Never! But she owes me now."

But Learning Fast

It's 1992, and this bank's newly hired mortgage broker gets his new PC. But broker confesses soberly to a pilot fish that he knows nothing about PCs. "He picked up the mouse and put it up to the screen and moved it around, but nothing happened," reports stunned fish. "Before I could say anything, he said, 'Don't laugh too much – I already called my wife, who laughed at me and explained what to do with it.' "

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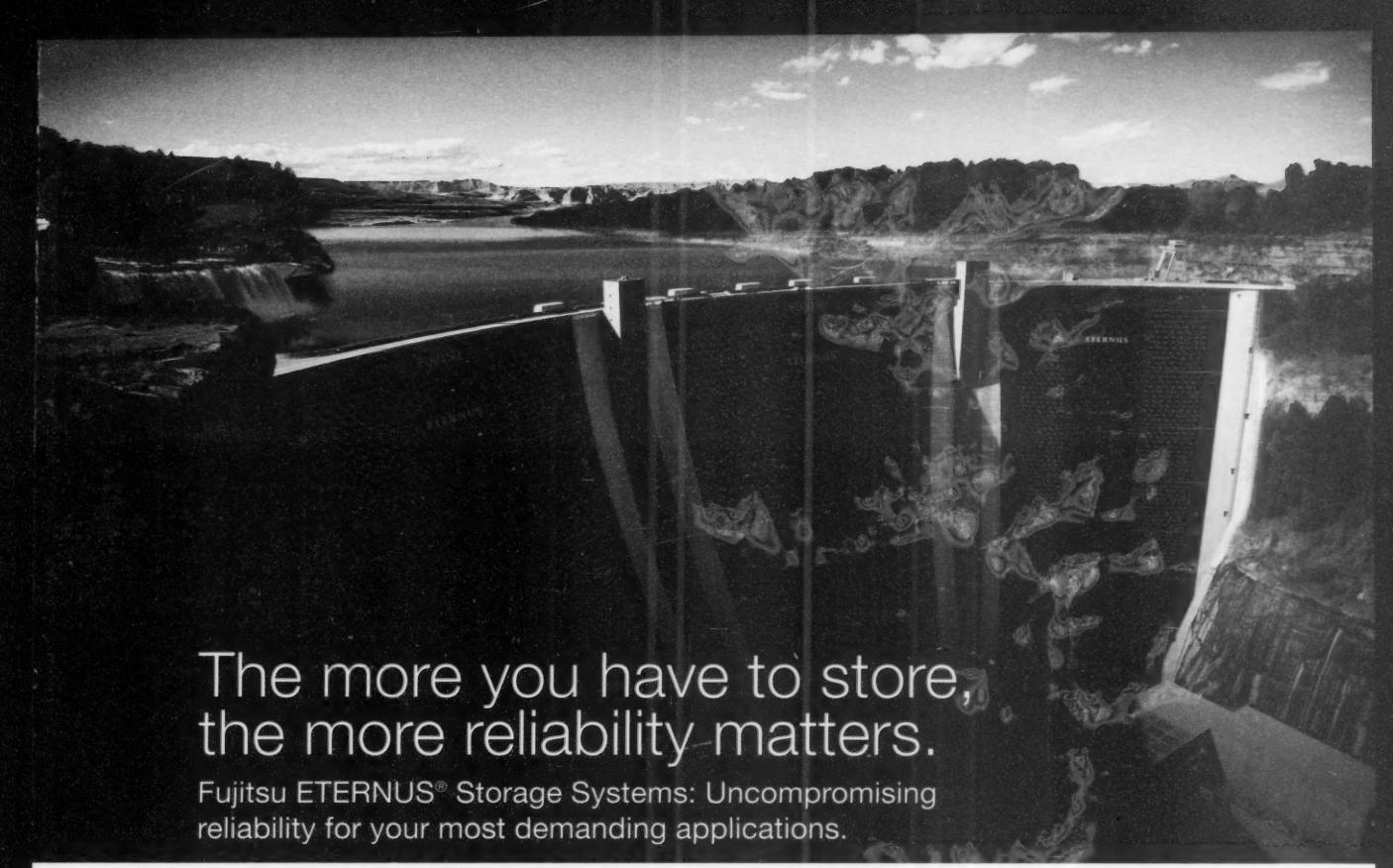

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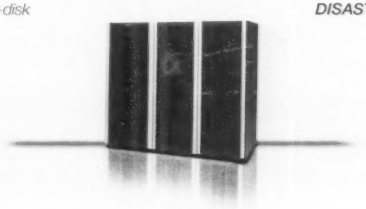

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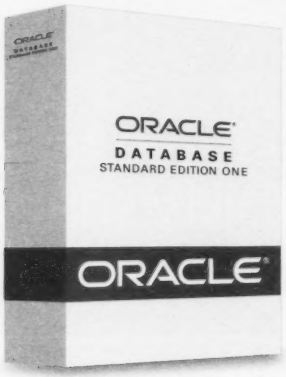

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